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THE CULTURE OF THE SOIL may be viewed in two very different aspects. In one, it is a mean and ignorant employment. It is a moral servitude, which man is condemned to pay to fields perpetually doomed to bear thorns and thistles. It is an unmeaning routine of planting and sowing, to earn bread enough to satisfy the hunger and cover the nakedness of the race. And it is performed in this light, by the servants of the soil, in a routine as simple, and with a spirit scarcely more intelligent than that of the beasts which draw the plough that tears open the bosom of a hard and ungenial earth!

What is the other aspect in which agriculture may be viewed? Very different indeed. It is an employment at once the most natural, noble and independent that can engage the energies of man. It brings the whole earth into subjection. It transforms unproductive tracts into fruitful fields and gardens. It raises man out of the uncertain and wild life of the fisher and hunter, into that where all the best institutions of society have their birth. It is the mother of all the arts, all the commerce, and all the industrial employments that maintain the civilization of the world. It is full of the most profound physical wonders, and involves an insight into the whole history of the planet, and the hidden laws that govern that most common and palpable, and yet most wonderful and incomprehensible substance—matter! There has never yet lived one who has been philosopher enough to penetrate farther than the outer vestibules of its great temples of truth; and there are mysteries enough yet unexplained in that every day miracle, the growth of an acorn, to excite for ages the attention and admiration of the most profound worshipper of God's works.

Fortunately for us and for our age, too much light has already dawned upon us to allow intelligent men ever to relapse into any such degrading view of the aim and rights of the cultivator as that first presented. We have too generally ascertained the value of science, imperfect as it still is, applied to farming and gardening, to be contented any more to go back to that condition of things when a crooked tree was used for a plough, and nuts and wild berries were sufficient to satisfy the rude appetite of man. The natural sciences have lately opened new revelations to us of the hidden problems of growth, nutrition and decay, in the vegetable and animal kingdoms. Secrets have been laid bare that

give us a new key to power, in our attempts to gain the mastery over matter, and we are continually on the alert to verify and put in practice our newly acquired knowledge, or to add in every possible way to the old stock. Men are no longer contented to reap short crops from worn out soil. They look for scientific means of renovating it. They would make the earth do its utmost. Agriculture is thus losing its old character of being merely physical drudgery, and is rapidly becoming a science, full of profound interest, as well as a grand practical art, which, Atlas-like, bears the burden of the world on its back.

It is not to be denied that CHEMISTRY is the great railroad which has lately been opened, graded and partially set in operation, to facilitate progress through that wide and comparatively unexplored territory—*scientific cultivation:* chemistry, which has scrutinised and analysed till she has made many things, formerly doubtful and hidden, as clear as noon-day. And it is by watching her movements closely, by testing her theories by practice, by seizing every valuable suggestion, and working out her problems patiently and fairly, that the cultivator is mainly to hope for progress in the future.

No one who applies his reasoning powers to the subject will fail to see, also, how many interesting points are yet in obscurity; how many important facts are only just beginning to dawn upon the patient investigator; how much is yet to be learned only by repeated experiments; and how many fail who expect to get *immediate* replies from nature, to questions whose satisfactory solution must depend upon a variety of preliminary knowledge, only to be gathered slowly and patiently, by those who are unceasing in their devotion to her teachings.

There are no means of calculating how much chemistry has done for agriculture within the last ten years. We say this, not in the sanguine spirit of one who reads a volume on agricultural chemistry for the first time, and imagines that by the application of a few salts he can directly change barren fields into fertile bottoms, and raise 100 bushels of corn where 20 grew before. But we say it after no little observation of the results of experimental farming—full of failures and errors, with only occasional examples of brilliant success—as it is.

There are numbers of readers who, seeing the partial operations of nature laid bare, imagine that the whole secret of assimilation is discovered, and by taking too short a route to the end in view, they destroy all. They may be likened to those intellectual sluggards who are captivated by certain *easy roads to learning*, the gates of which are kept by those who teach every branch of human wisdom in *six lessons!* This gallop into the futurity of laborious effort, generally produces a giddiness that is almost equivalent to the obliteration of all one's power of discernment. And though one may, now, by the aid of magnetism, "put a girdle round the earth" in *less* than "forty minutes," there are still conditions of nature that imperiously demand time and space.

Granting, therefore, that there are hundreds who have failed in their experiments with agricultural chemistry, still we contend that there are a few of the more skilful and thorough experimenters who have been eminently successful; and *whose success will gradually form the basis of a new and improved system of agriculture.*

More than this, the attention which has been drawn to the value of careful and intelligent culture, is producing indirectly the most valuable results. Twenty years ago

not one person in ten thousand, cultivating the land, among us, thought of any other means of enriching it than that of supplying it with barn-yard manure. At the present moment there is not an intelligent farmer in the country who is not conversant with the economy and value of muck, ashes, lime, marl, bones and a number of less important fertilizers. In all the older and less fertile parts of the country, where manure is no longer cheap, the use of these fertilizers has enabled agriculturists of limited means to keep their land in high condition, and add thirty per cent. to their crops. And any one who will take the trouble to examine into the matter in our principal cities, will find that fifty articles, in the aggregate of enormous value for manure to the farmer and gardener, which were until lately entirely thrown away, are now preserved, are articles of commerce, and are all turned to the utmost account as food for the crops.

We have been led into this train of thought by observing that after the great staple of the agriculturist—bread stuffs and the grasses—have had that first attention at the hands of the chemist which they so eminently deserve, some investigation is now going on for the benefit of the horticulturist and the orchardist, of which it is our duty to keep our readers informed. We allude to the analyses which have been made of the composition of the inorganic parts of vegetables, and more especially of some of the *fruit trees* whose culture is becoming an object of so much importance to this country.

We think no one at all familiar with modern chemistry or scientific agriculture, can for a moment deny the value of *specific manures*. It is the great platform upon which the scientific culture of the present day stands, and which raises it so high above the old empirical routine of the last century. But in order to be able to make practical application, with any tolerable chance of success, of the doctrine of special manures, we must have before us careful analyses of the composition of the plants we propose to cultivate. Science has proved to us that there are substances which are of universal value as food for plants; but it is now no less certain that, as the composition of different plants, and even different species of plants, differs very widely, so must certain substances essential to the growth of the plant be present in the soil, or that growth is feeble and imperfect.

A little observation will satisfy any careful inquirer, that but little is yet practically known of the proper mode of *manuring orchards*, and rendering them uniformly productive. To say that in almost every neighborhood, orchards will be found which bear large crops of fine fruit, while others not half a mile off, produce only small crops; that in one part of the country a given kind of fruit is always large and fair, and in another it is always spotted and defective; that barn-yard manure seems to produce but little effect in remedying these evils; that orchards often nearly cease bearing while yet the trees are in full maturity, and by no means in a worn out or dying condition: to say all this, is only to repeat what every experienced cultivator of orchards is familiar with, but for which few or no practical cultivators have the explanation ready.

We have seen a heavy application of common manure made to apple trees, which were in this inexplicable condition of bearing no sound fruit, without producing any good effects. The trees grew more luxuriantly, but the fruit was still knotty and inferior. In this state of things, the baffled practical man, very properly attributes it to

some inherent defect in the soil, and looks to the chemist for aid.

We are glad to be able to say, this aid is forthcoming. Many valuable analyses of the *ashes* of trees and plants, have been made lately at *Giessen*, and may be found in the appendix to the *last edition* of LIEBIG's *Agricultural Chemistry*.* And still more recently, Dr. EMMONS of Albany, well known by his labors in the cause of scientific agriculture,† has devoted considerable time and attention to ascertaining the elements which enter into the composition of the *inorganic parts of trees.*

The result of this investigation we consider of the highest importance to the fruit cultivator and the orchardist. In fact, though still imperfect, it clears up many difficult points, and gives us some basis for a more philosophical system of manuring orchards than has yet prevailed.

The importance of the gaseous and more soluble manures—ammonia, nitrogen, etc., to the whole vegetable kingdom, has long been pretty thoroughly appreciated. The old-fashioned, practical man, dating from Noah's time, who stands by his well-rotted barn-yard compost, and the new-school disciple, who uses guano and liquid manures, are both ready witnesses to prove the universal and vital importance of these animal fertilizers,—manures that accelerate the growth and give volume and bulk to every part of a tree or plant.

But the value and importance of the heavier and more insoluble earthy elements have often been disputed, and, though ably demonstrated of late, there are still comparatively few who understand their application, or who have any clear and definite ideas of their value in the economy of vegetable structure.

* Published by Wiley & Putnam, New-York.

† See his quarto vol. on the *Agriculture of New-York*, lately published, and forming part of the State survey.

To get at the exact quantities of these ingredients, which enter into the composition of plants, it is necessary to analyse their *ashes.*

It is not our purpose, at the present moment, to go beyond the limits of the orchard. We shall therefore confine ourselves to the most important elements which make up the wood and bark of the *apple*, the *pear*, and the *grape vine.*

According to Dr. EMMONS's analysis, in 100 parts of the ashes of the *sap-wood* of the apple tree, there are three elements that greatly preponderate, as follows: 16 parts *potash*, 17 parts *phosphate of lime*, and 18 parts *lime*. In the *bark* of this tree, there are 4 parts *potash* and 51 parts *lime.*

100 parts of the ashes of the sap-wood of the *pear* tree, show 22 parts of *potash*, 27 parts of phosphate of lime, and 12 parts of lime; the bark giving 6 parts of potash, 6 parts of phosphate, and 30 parts of lime.

The analysis of the common wild *grape vine*, shows 20 parts of *potash*, 15 parts *phosphate of lime*, and 17 parts *lime* to every 100 parts; the bark giving 1 part *potash*, 5 parts *phosphate of lime*, and 39 parts of *lime.*

Now, no intelligent cultivator can examine these results (which we have given thus in the rough* to simplify the matter,) without being conscious at a glance, that this large necessity existing in these fruit trees for *potash*, *phosphate of lime*, and *lime*, is not at all provided for by the common system of

* The following are Dr. Emmons's exact analyses:

ASH OF THE PEAR.

	Sap-wood.	*Bark.*
Potash,	22.25	6.20
Soda,	1.84	
Chlorine,	0.31	1.70
Sulphuric acid,	0.50	1.80
Phosphate of lime,	27.22	6.50
Phosphate of peroxide of iron,	0.31	
Carbonic acid,	27.69	37.29
Lime,	12.64	30.36
Magnesia,	3.00	9.40
Silex,	0.30	0.40
Coal,	0.17	0.65
Organic matter,	4.02	4.20
	100.25	98.30

manuring orchards. Hence, in certain soils where a part or all of these elements naturally exist, we see both the finest fruit and extraordinary productiveness in the orchards. In other soils, well suited perhaps for many other crops, orchards languish and are found unprofitable.

More than this, Dr. EMMONS has pointed out what is perhaps known to few of our readers, that these inorganic substances form, as it were, the skeleton or bones of all vegetables as they do more tangibly in animals. The bones of animals are lime—in the form of phosphate and carbonate—and the frailer net-work skeleton of trunk, leaves and fibres in plants, is formed of precisely the same substance. The bark, the veins and nerves of the leaves, the skin of fruit, are all formed upon a frame-work of this organized salt of lime, which, in the growth of the plant, is taken up from the soil, and circulates freely to the outer extremities of the tree or plant in all directions.

As these elements, which we have named as forming so large a part of the ashes of plants, are found in animal manures, the latter are quite sufficient in soils where they are not naturally deficient. But, on the other hand, where the soil is wanting in lime, potash, and phosphate of lime, common manures will not and do not answer the purpose. Experience has abundantly proved the latter position; and science has at length pointed out the cause of the failure.

ASH OF THE APPLE.

	Sap-wood.	*Bark.*
Potash,	16.19	4.930
Soda,	3.11	3.285
Chloride of sodium,	0.42	0.540
Sulphate of lime,	0.05	0.637
Phosphate of peroxide of iron,	0.80	0.375
Phosphate of lime,	17.50	2.425
Phosphate of magnesia,	0.20	
Carbonic acid,	29.10	44.830
Lime,	18.63	51.578
Magnesia,	8.40	0.150
Silica,	0.85	0.200
Soluble silica,	0.80	0.400
Organic matter,	4.60	2.100
	109.65	109.450

COMMON WILD GRAPE VINE.

	Wood.	*Bark.*
Potash,	20.84	1.77
Soda,	2 06	0 27
Chlorine,	0.02	0.40
Sulphuric acid,	0.23	trace.
Phosphate of lime,	15.40	5.04
Phosphate of peroxide of iron,	1.20	5.04
Carbonic acid,	34.83	32.22
Lime,	17.33	39.32
Magnesia,	4.40	0.80
Silex,	2.80	14.00
Soluble silica,	0.00	0.30
Coal and organic matter,	2.20	1.70
	100.21	100.86

The remedy is simple enough. Lime, potash and bones (which latter abound in the phosphate,) are cheap materials, easily obtained in any part of the country. If they are not at hand, common *wood ashes*, which contains all of them, is an easy substitute, and one which may be used in much larger quantities than it is commonly applied, with the most decided benefit to all fruit trees.

The more scientific cultivator of fruit will not fail, however, to observe that there is a very marked difference in the proportion of these inorganic matters in the ashes of the trees under our notice. Thus, potash and phosphate of lime enter much more largely into the composition of the pear than they do in that of the apple tree; while lime is much more abundant in the apple than in the pear; the ashes of the bark of the apple tree being more *than half lime.* Potash and lime are also found to be the predominant elements of the inorganic structure of the grape vine.

Hence *potash* and *bone dust* will be the principal substances to nourish the structure of the pear tree; *lime*, the principal substance for the apple; and *potash* for the grape vine; though each of the others are also highly essential.

Since these salts of lime penetrate to the remotest extremities of the tree; since, indeed, they are the foundation upon which

a healthy structure of all the other parts must rest, it appears to us a rational deduction that upon their presence, in sufficient quantity, must depend largely the general healthy condition of the leaves and fruit. Hence, it is not unlikely that certain diseases of fruit, known as the bitter rot in apples, the mildew in grapes, and "cracking" in pears, known and confined to certain districts of the country, may arise from a deficiency of these inorganic elements in the soil of those districts, (not overlooking *sulphate of iron*, so marked in its effect on the health of foliage.) Careful experiment will determine this; and if such should prove to be the case, one of the greatest obstacles to universal orchard culture will be easily removed.*

What we have here endeavored to convey of the importance of certain specific manures for fruit trees, is by no means all theory. We could already give numerous practical illustrations to fortify it. Two will perhaps suffice for the present.

The greatest orchard in America, most undeniably, is that at Pelham farm, on the Hudson. How many barrels of apples are raised there annually, we are not informed. But we do know, first, that the crop this season, numbered *several thousand barrels* of Newtown pippins, of a size, flavor and beauty that we never saw surpassed; and second, that the Pelham Newtown pippins are as well known in Covent garden market, London, as a Bank of England note, and can as readily be turned into cash, with the highest premium over any other goods and chattels of the like description. Now the great secret of the orchard culture at the Pelham farm, is the *abundant use of lime.* Not that high culture and plenty of other necessary food are wanting; but that lime is the great basis of large crops and smooth, high flavored fruit.

Again, the greatest difficulty in fruit culture in America, is to grow the foreign grape in the open air. It is not heat nor fertility that is wanting, for one section or another of the country can give both these in perfection; but in all sections the fruit mildews, and is, on the whole, nearly worthless. An intelligent cultivator, living in a warm and genial corner of Canada West, (bordering on the western part of Lake Erie,) had been more than usually successful for several seasons in maturing several varieties of foreign grapes in the open air. At length they began to fail—even upon the young vines, and the mildew made its appearance to render nearly the whole crop worthless. Last season, this gentleman, following a hint in this journal, gave one of his grape borders a *heavy dressing of wood ashes.* These ashes contained, of course, both the potash and the lime, so necessary to the grape. He had the satisfaction of raising, this season, a crop of fair and excellent grapes, (of which we had occular proof,) from this border, while the other vines of the same age (and treated, otherwise, in the same way,) bore only mildewed and worthless fruit. We consider both these instances excellent illustrations of the value of specific manures.

We promise to return to this subject again. In the mean time it may not be useless to caution some of our readers against pursuing the *wholesale* course with specifics which all quack doctors are so fond of recommending—i. e., "if a thing is

* It will be remembered that, in our work on Fruits, we opposed the theory that all the old pears, liable to *crack* along the sea coast, and in some other sections of the country, were "worn out." We attributed their apparent decline to unfavorable soil, injudicious culture and ungenial climate. A good deal of observation since those views were published, has convinced us that "cracking" in the pear is to be attributed more to an exhaustion, or a want of, certain necessary elements in the soil, than to any other cause. Age has little or nothing to do with it, since *Van Mon's Leon Le Clerc*, one of the newest and most vigorous of pears, has cracked in some soils for the past two years around Boston, though perfectly fair in other soils there, and in the interior.

good, you cannot give too much." A tree is not all *bones*, and therefore something must be considered besides its anatomical structure—important as that may be. The good, old-fashioned, substantial nourishment must not be withheld, and a suitable ration from the compost or manure heap, as usual, will by no means prevent our orchards being benefitted all the more by the substances of which they have especial need, in certain portions of their organization.

REMARKS ON GARDENING AS A SCIENCE.—No. 7.

BY DR. WM. W. VALK, FLUSHING, L. I.

Air.—Prof. Liebig has undoubtedly put forth some astounding disclosures respecting certain atmospherical phenomena, which, were they not familiar to most reflecting minds, would be regarded with surprise and awe. On one point he thus expresses himself:—"Although the absolute quantity of oxygen contained in the atmosphere, appears very great when represented by numbers, yet it is not inexhaustible. One man consumes by respiration about forty-five Hessian cubic feet (nearly twenty-five English,) of oxygen in twenty-four hours; and a small town like Giessen, with about 7000 inhabitants, extracts yearly from the air, by the wood employed as fuel, more than 1000 millions of cubic feet of this gas." Every act of respiration, of combustion, and of fermentation, develops carbonic acid, which passes into, and blends with the atmospheric volume; but this gas will be further noticed at some future time.

We have said that the atmospheric gases are only *mixed*—not chemically united; and as this proposition has been satisfactorily demonstrated by Dr. Dalton and other chemists, the conclusion is both reasonable and correct, that the atmosphere is not a chemical compound in the ordinary acceptation of that term. It now remains to inquire what agency it exerts upon vegetable life? In order, however, *to afford scope for reflection*, let us refer to the *Gardeners' Magazine* (English) for 1834, vol. x. page 207. There, is an article by Mr. N. B. Ward, "*On growing Ferns and other plants in glass cases*, in the midst of the smoke of London." This gentleman thus writes:—"I was accidentally led, about four or five years ago, to make some experiments on the growth of ferns, &c., in closely glazed vessels, from the following circumstances: I had buried the chrysalis of a sphinx in some moist mould in a large bottle, covered with a lid. The insect attained its perfect form in about a month, when I observed one or two minute specks of vegetation upon the surface of the mould. Curious to observe the development of plants in so confined a situation, I placed the bottle outside one of my windows with a northern aspect: the plants proved to be one of *Poa annua*, and one of *Nephrodium* (*Asplenium*, Swz.) *filix mas*. In this situation they lived for more than three years; during which time no fresh water was given them, nor was the lid removed. The fern produced four or five new fronds every year; and the Poa flowered the second year, but did not ripen its seeds. Both plants ultimately perished from the admission of rain water, in consequence of the rusting of the lid." Thus

excluded from all air, did Mr. Ward succeed in growing not only "more than sixty species of fern," (these are enumerated) but he also grew with the like success, *Oxalis acetosella*, *Anemone nemorosa*, *Dentaria bulbifera*, and a great many more.

"The ferns, &c., may be placed in boxes of any size or shape, furnished with glazed sides and a glazed lid. The bottom of the box should be filled with nearly equal portions of bog-moss, vegetable mould, and sand; and the ferns, after planting, should be most copiously watered, and the superfluous water allowed to drain off through a plug-hole in the bottom of the box; the plug is then to be put in tight, the lid put on, and no farther care is requisite than that of keeping the box in the light. *In this way plants will grow for years without any fresh supply of water.*"

In 1842, after Mr. Ward's plants had been thus grown for eight years, the collection was inspected by Mr. Paxton. It then consisted of glass cases, in the windows facing the south, the enclosed atmosphere of which is sometimes raised by solar heat to 100°; also, "of a close sort of fossil green-house at the back of the house, glazed with puttied laps, which resembles a kind of damp grotto. The external surface of the lights was quite disfigured with the soot which abounds in the atmosphere; yet in this gloomy and extremely damp erection, ferns of all climates flourish in verdant health; and not only ferns, but *Thunbergia*, *Begonia*, *Fuchsias*, and other plants, which are the ornaments of our stoves and green-houses. In the cases, no air can enter but what passes through the mould; and yet, some Orchidaceæ and tropical plants thrive and even bloom, although neither air has been admitted for seven years, nor any water given for more than five months."

Now such *facts* as these are worth a host of theories, and afford proof beyond all controversy, that the free admission of air is *not* indispensably necessary to healthy or even luxuriant vegetation. During the whole of last summer, we grew a collection of plants in a "Ward's case," 4 feet long, 2 feet 6 inches wide, and 3 feet high. The bottom of the case is 6 inches deep, and lined with zinc; it stands on castors, and resembles a miniature conservatory. Our plants are in pots, and these are the names:—*Alona cælestis*, *Abelia floribunda*, *Statice Wildenovii*, *Berberis trifoliata*, *Poinciana Gilliesii*, *Jasminum affine*, *Azalea ovata*, *Echiveria rosea*, *Cereus crenatus*, *Polypodeum aureum* (fern), *Platyceium alcicome* (fern), *Maxillaria aromatica* (orchid), *Camellia de la Reine*, and a few others. These all flourished from April to October without air or water, except what they received when put in; and although the habits of the plants are by no means the same, each seemed to be as much "at home" as could be desired. By accident, the top of the case was badly broken, the plants were removed to the green-house and treated as usual; since which time, though all are in good order, yet they want that clean and thrifty appearance so manifest while they were in the case. For the cultivation of plants in the parlor and drawing-room, these cases are admirably well adapted; and if made with taste as they should be for such uses, and filled with carefully selected specimens, they would soon become fashionable and very much sought after.

Air doubtless promotes the fecundity and maturation of plants; it checks luxuriant growth, favors the development of the floral organs, promotes evaporation, and carries off moisture rapidly; but if we seek in it the supply of nutrimental matter, we

shall possibly be disappointed. It is to the carbonic acid, and the aqueous vapor held in solution, that we must refer: the first acts directly upon the foliage; the second indirectly, in the form of rain, or dewey moisture—agencies forming no part of the subject now treated of. Whatever tends to decompose air by the abstraction of oxygen deteriorates it, as we have seen; but is there any reason to suppose that plants decompose air? If they do not, then is air to be regarded only as a vehicle or medium to receive and transmit gaseous matters.

This view of the subject is very materially elucidated by Mr. WARD's experiment. Air so impure as that of many parts of London, is deadly to vegetation; butthat which penetrates through the soil in Mr. W.'s cases, or the almost sealed glazing of his fernery, is purified by filtration, and the plants are as verdant as in their natural habitats. Do not these facts prove that we are too liberal in our applications of air; and would not the major part of our tender plants thrive equally well with closed glasses, and even with puttied laps? Moisture would be more regularly maintained and distributed: the most brilliant light would be better supported, and vegetation be consequently far more luxuriant. A fig tree in full foliage has been removed from a stove to the open air, and within twelve hours had not a single living leaf upon it. Air checks but does not harden; it ripens the wood, and therefore promotes bloom: hence its great use to pelargoniums, heaths, and many hard-wooded plants. But it is prejudicial to luxuriant growth, and therefore should not be permitted to enter any house in the form of a current, and especially as it is a known fact that plants support uninjured a much higher as well as lower temperature in close situations. To ascertain the true agency of air in plant growing, experiments should be widely instituted; for, after what we have seen, it becomes an important question whether, as a general thing, we are not at infinite pains to ventilate our plant-houses, with no other or better result than incurring much trouble without any sort of advantage.

WM. W. VALK, M. D.

Flushing, L. I., Nov. 1847.

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[Our correspondent does not, we suppose, deny the superior growth and luxuriance of plants in houses heated in the "Polmaise" mode, now so popular in England, in which a stream of warm air is continually introduced, over those heated in the old way with little ventilation. ED.]

PROFITS OF FRUIT CULTURE.

BY B. G. BOSWELL, PHILADELHHIA.

HAVING seen in a late number of the Horticulturist, an account of a cherry tree that produced ten dollars worth of fruit in one season, permit me to give a chapter of facts on fruits, most of which are within my own personal knowledge.

C. A. CABLE, of Cleveland, has an orchard of an hundred cherry trees, now 22 years old. In the year 1845, his crop sold for upwards of one thousand dollars. Mr. C. manages his orchard better than any other person in the Union, so far as my knowledge extends. The trees are planted out twenty-five feet apart, the ground kept properly enriched and cultivated, but no crop is put in.

Elisha Swain, of Darby, near Philadelphia, has the remains of a cherry orchard, numbering seventy trees, mostly of the Mayduke variety. In the height of the season, his sales amount to upwards of eighty dollars per day. Mr. S., to ensure a good crop every season, digs in a horse-cart load of manure to each tree in autumn.

Hill Pennell, of Darby, has twenty apple trees, of the Early Redstreak and Early Queen varieties, that stand on half an acre of ground. In 1846 these trees produced three hundred bushels of fruit that sold in Philadelphia market for 75 cents per bushel, or two hundred and twenty-five dollars for the crop.

Mr. Pennell has a grape vine of the Raccoon [Fox grape] variety, that covers the tops of fourteen apple trees. It has never been pruned, but produces seventy-five bushels of grapes yearly, that sell for one dollar per bushel. The apple trees produce good crops of fruit, and under the trees is produced a crop of grass; thus making three crops from one lot of ground.

James Laws, of Philadelphia, has a Washington plum tree, that produces six bushels of fruit yearly, that would sell in market for ten dollars per bushel. Five of the above plums weigh a pound.

Mr. Laws has a small vineyard of Isabella and Catawba grapes, near Chester, sixteen miles below Philadelphia, three-eighths of an acre of which came into bearing in 1845. The sales amounted to three hundred dollars at eight cents per pound, or at the rate of eight hundred dollars per acre from vines only four years old.

Brinton Darlington, of West Chester, Pa., has a Catawba grape vine, that produces ten bushels of grapes yearly. This crop is worth forty dollars at market price.

Jacob Steinmentz, of Philadelphia, has a Blue Gage plum tree, that produces ten bushels of fruit in a season, worth in market, thirty dollars.

My friend, Ellwood Harvey, Chaddsford, Pa., the present season gathered thirteen quarts of gooseberries from one plant.

A gardener near Philadelphia, has two rows of goosebery plants, one hundred and fifty feet long. One afternoon, he gathered with his own hands, six bushels of fruit, and the next morning sold them in Philadelphia market for twenty-four dollars.

A gentleman of Philadelphia having two apricot trees, that produced more fruit than his family could consume, concluded to send the balance to market, and expend the money it would bring in purchasing wood for the poor.

Judge Line, of Carlisle, Pa., has had two Syrian apricot trees that have produced five bushels to each tree in a season. In the Philadelphia market, they would have commanded one hundred and twenty dollars, in the New-York market one hundred and forty dollars.

Hugh Hatch, of Camden, N. J., has four Tewksbury Winter Blush apple trees, that in 1846 produced one hundred and forty market baskets of apples. Without any extra care, ninety baskes of these were on hand late in the spring of 1847, when they readily sold at one dollar per basket.

The following facts relative to fruit growing near the North river, I have never seen published. Three years ago, Mr. Charles Downing, of Newburgh, N. Y., informed me that a fruit-grower of his acquaintance in Fishkill Landing, N. Y., had gathered fifteen barrels of Lady apples from one tree, and sold them in New-York for forty-five dollars. The same gentleman you speak of, in your Fruits and Fruit Trees of America, as having sent to New-York, sixteen hundred bushels of plums in one season, has sent to New-York apricots and re-

ceived fourteen dollars per bushel for them. The above gentleman has often said, that his plum trees, which are set out about the buildings, and take up but little room, pay him more profit than the whole of his valuable farm of two hundred acres. Another fruit-grower in your neighborhood, has sent four hundred bushels of Frost Gage plums, to market in one season, and received twelve hundred dollars for them.

Yet with all these facts before us, there is no full supply of any kind of fruit in the Philadelphia market, except peaches. Many farmers and gardeners neglect setting out fruit trees from a natural negligence; others dislike to pay fifty cents for a fine plum tree; others again are afraid that every body will go to fruit-growing, and bring down the price to almost nothing. But we would ask, if there is any more danger of every body commencing on a large scale the culture of fruit, than there is that every body will commence the raising of onions, or the making of razor strops, or the cultivation of roses? Yours, etc.

B. G. Boswell.

THE DELIGHTS OF GARDENING, BY LAMARTINE.

TRANSLATED BY CHARLES KING, NEW-YORK.

There are many of our readers who think, doubtless, that they know by heart all the delights of the garden. To such we commend the following address. Certainly they cannot read it without feeling that much of the beauty and interest which lie hidden in this devotion to natural pursuits, were never fully revealed, until illumined by the imagination and the heart of Lamartine.

We owe the first sight of this fine production to Charles King, Esq., who has kindly translated it also for our readers, and prefaced it by the following note:—

The *charm of flowers, and of the gardener's calling*, has rarely been more touchingly or eloquently expressed and illustrated, than in the following address by a distinguished poet, historian and statesman of France, M. de Lamartine.

It was delivered recently at *Macon*, at the annual exhibition and meeting of the Horticultural Society of *Saone and Loire*, from which department M. de Lamartine is a member of the Chamber of Deputies.

Where so much depends, as in an address so poetical and imaginative as this, upon the style and diction of the orator, a translation can but feebly render the charm of the original. With this allowance, it may be hoped the readers of the Horticulturist will not regret the space devoted to this address. CHARLES KING.

New-York, Nov. 16, 1847.

.....

Gentlemen—It belongs particularly, indeed in my judgment it should belong exclusively, to those masters of the Art whom you have just heard — to those magistrates of nature — it should above all belong to the learned and venerable Dean of Agriculture (M. Jard), who, just now in referring to me, has transferred to me as a public man the sentiments of affectionate regard with which he honors me in private life—to such men it peculiarly belongs to entertain you about the useful and attractive science of gardening, of which the fruits and the flowers but now refreshed our senses in another enclosure. Nevertheless since it has been cast upon me as the national representative of all this population, to address you, after they have spoken, I will make the attempt. But what shall I say, that every one of you does not know a thousand times better than myself?

Of all those scientific nomenclatures which designate your annual exhibitions, of all those plants which flourish and fruc-

tify beneath your hands, I only know our vine, that common stock, the tree of life, which sustains us, enriches us, which has borne us all in this region as so many bunches of men (Smiles and applause). No: I repeat it to my shame, I know horticulture only by its enjoyments, its fine flowers, its agreeable odors, its sensualities; I know it only by that unreflecting attraction, natural and instinctive, which has led men at all times, and especially men of thought and of feeling, poets, writers, philosophers, warriors — even courtiers themselves — to delight in the sight, the contemplation and the repose of gardens; to escape thither from the noise of the crowd, the gaze of the multitude, the tumults of the forum; to shut themselves up under the shade of some climbing shrub, within the sound of some running spring, there to study the phenomena, to listen, with the ear on the ground, to the almost inaudible palpitations of the earth, the murmurs of vegetable life, the circulation of the sap in the branches; and to perceive springing within their own bosoms, those thoughts, those inspirations, now pious, now amorous, now philosophical and anon heroic, which pass under the name of *the genius of solitude;* or again to come thither in the midday or the evening of life, to recover strength in that moral weariness which at certain periods enervates men of action, as bodily fatigues sometimes overtake you in the heat, or at the close of the day, and compel you to repose yourself beneath a tree you have been trimming, upon the bed you have been digging (Applause).

It is this natural taste, this sacred relationship between man and a little plot of ground more particularly appropriated, fenced in, cultivated, planted, sown, watered, and harvested by the hand of the gardener, which, in all times, have made the story of the garden a part of the story of the nation, and also given it a place in the reveries as to the future life, or the theogony of peoples. Examine all theogonies, all religions, all history, even all fable, and not one among them all that does not assign man in his origin to an Eden, that is, a garden: there is not one that, after death, does not conduct him to an Elysium; not one that does not mingle the idea of a garden abounding in living waters and in fruits, with the images and reveries of primitive felicity on Earth, of a happy hereafter in Heaven. What does all this prove, gentlemen? That the imagination of man, in all its various dreams of a paradise, has been unable to devise any thing more charming than a terrestrial or a celestial garden, with living waters, shades, flowers, fruits, a green sod, trees, a propitious sky, serene stars—a reciprocal friendship, so to speak, between man and the soil. So true is it, too, that in his most delicious reveries, man has been able to invent nothing more perfect than nature. A spot in the sunshine, protected from evil-doers, embellished by vegetation, animated by the birds of heaven and animals the friends of man, made sacred by the work of his hands, and made holy by the presence of the Creator; the habitation of the family, the abode of love, of friendship, as it has been for a successson of immortal generations. In such an abode it is that Human Nature has always placed Happiness; and is it not there you persevere in seeking it? In seeking it, not always perfect and unchangeable as in our dreams, but in seeking it at least in those brief and imperfect glimpses which it has pleased God to permit us now and then to obtain in this world below?

You do well, very well, to seek it there: for if your pursuit is the happiest of pursuits, your science is in fact the least chimerical, the least uncertain, the least disappointing, the surest of all our sciences.

Yes: for over and above all other considerations which should bind the horticulturist to his art, there is one which has often struck me, and doubtless has often struck you all, and it is that of all the arts, of all the sciences I should say, yours is the one that most truly deserves that name, which least misleads those who cultivate it, which least puzzles the brain with the chimeras of systems, and which carries man and confines him most forcibly to the Truth, by its details of application; and why so? You all know why. Because your science is wholly experimental and practical; it leaves nothing to speculation, to hypothesis, to conjecture, to the chances of the imagination: there are no metaphysics of the soil;

there are no chimeras in vegetation : rigorous, attentive, daily observation is your learning. Happily for you, you have not, like us who deal with the world of thought, of history, of politics and other departments of human knowledge ; you have not to do with the uncertainties of the human mind, with the mania of systems, with the passions, the reveries, the prejudices, sometimes with the wild fancies of schools, of sects, which render every thing obscure, which lead men on for centuries in error or in doubt, to those late awakenings, or sometimes to the brink of those abysses, where man stumbles in the paths of false knowledge, and only gathers himself up again to run after some fresher delusion. No : your pursuit gives no play to such errors, or to such repentance ; and again why? Because in your science, you always, as it were, will have your hand upon Nature, and upon her laws, visible, palpable, mysterious indeed, but yet evident : you work, so to speak, side by side with God ! You are but co-operators with the divine laws of vegetation. But divine laws bend not to our vain caprices.

God, in his changeless works, heeds not our chimeras. Nature has no complaisance for our false systems. She is sovereign and absolute as her author. She resists our foolish attempts ; she overthrows — sometimes rudely enough — our illusions. She seconds our efforts, aids them, and rewards them abundantly if directed in the right sense ; but if we make a mistake, or attempt to force her, to compel her out of her course, she at once asserts her power, and blasts our labors with sterility, by the wasting away and the death of every thing we have attempted to effect in opposition to her laws, and in her despite. We others may with impunity make mistakes, and for ages at a time, in history, in philosophy, in religious and in social systems, even in astronomy. We may devise on these heads the most absurd chimeras, and impose them upon the world for a long time as truth. That cannot you do, gardeners and agriculturists. Your longest error cannot outlast a single season (Applause), the period of a crop, one spring, one year at most. Such is the term of your error ; for it is the term of your experiments. That once past, Nature prevails, sets you right. She reveals her will to you, that you may make haste to conform your labors to it. You interrogate her unceasingly, respectfully, experimentally ; and she always makes true and prompt replies. You register those replies in your memoirs, in your books, in your manuals ; and from this intercepted dialogue between man that questions, and Nature that replies, you form those catechisms of the farmer and the gardener, which become the science of vegetation (Applause).

Thus it is through these elementary books, and these congresses of cultivators of nature, such as this now assembled, that your science is deep-rooted, extended, improved and wide-spread. Thus it has been since PLINY, who made a catalogue of all the plants within the Roman empire ; since CHARLEMAGNE, who, in his *Capitularies*, which were in some sort his charter or constitution, particularized the sorts and the number of vegetables he wished cultivated ; since CATO, the most severe of statesmen, requiring that each Roman citizen, however poor he might be, should cultivate some flowers in his plot, in order that the elegance of such culture should contribute elegance and refinement to the manners of the people ; for though he aimed at correcting the excessive luxuriousness of the Republic, he desired no *sumptuary law* in vegetation—down to the various maritime and plant-seeking expeditions of the Crusaders, the Dutch, the English, to gather, one by one, from all parts of the globe, those ninety-eight vegetables or flowers, with which your kitchen garden or flower beds are now enamelled — the art of gardening, rudely sketched by the Romans ; greatly extended and carried almost to marvellous perfection by the Chinese ; taking, in England, the character and proportions of an aristocratic luxury ; depreciated and belittled in Holland, down almost to the adoration of a tulip ; elevated in Italy to the dignity of a splendid art, associated with statuary, sculpture and architecture ; rendered useful in France by its alliance with the higher walks of agriculture, of which it is the pathfinder —has finally, thanks to your efforts, reached in various parts of Europe the condition of a National Industry, giving employment to

millions of men, and the aliment of a commerce in fruits and flowers worth millions of money.

Thus it is, and I pray you to consider it, gentlemen, that gardening, which heretofore was only a sort of amusement or domestic luxury, an adornment of the soil, has become nowadays a new and magnificent object of commerce. At a time when labor fails for man, more than man fails for labor; at a time when to invent a new industry, is to invent wealth, occupation, wages, life itself for numberless workmen — is not this a view fitted to impress the statesman, to touch an intelligent minister of agriculture and of commerce? Do not, gentlemen, suppose this is mere hyperbole—exaggeration. I am just returned from the South, and have seen on the shores of the Mediterranean a very considerable coasting trade in flowers! Tuscany and Genoa exported to the amount of several millions of money, from their flower beds. And one art gives rise to another. After the art of successfully cultivating flowers, has come that of gathering and assorting them according to their shades, odors, colors. This art has made such progress at Genoa, for instance, has been so studied there, that they can combine, intertwine, plait, and, as it were, so weave together roses, pinks, dahlias, tulips and ranunculuses, that the bouquets prepared to decorate tables on gala days — bouquets often of a yard in circumference, resemble Turkey carpets, vegetable stuffs, odorous velvets, mosaics of plants. There are there, vegetable weavers of flowers, who turn out their perfumed fabrics; the flower girls, there as at Athens, form a class apart. The bouquets which you admire, you inhale at the *fetes* of Toulon, Marseilles, Bourdeaux, and even of Paris, are woven at Genoa or at Florence. Hence the gardening of luxury becomes each day more and more a regular business. Go on and render it more perfect, and it will one day become a fine art; a school of painting, of which the pallet will be the garden.

But whatever be the value in the eyes of the economist, of gardening industry, let us frankly admit, gentlemen, that therein does *not* lie the principal and eternal charm of the Garden. No: that which in all time has rendered this pursuit so fascinating to man, and especially to the man of sensibility, the student, the poet, the man of letters, the sage, the author, the philosopher, and even the warrior, is the near and intimate relation into which it brings us with nature; the charm resulting from the study of her phenomena; the pious contemplation of the wonders of vegetation; those perpetually renewed delights in beholding the universal life, that dumb intelligence, sacred and wonderful, through all vegetable creation; those indefinite limits between vegetable and animal life, which seem to combine all organic beings in a mysterious unity, in despite of their diversities and apparent separation: it is this conviction of the divinity of nature, that has made me sometimes even tax myself with pantheism. Yet I am not a pantheist, gentlemen. No, I am not like the child, who, seeing for the first time a form in a mirror, takes the mirror and the form for one, and stretches out his hand to grasp the image. Nature, to my eyes as to yours, is the magnificent mirror, infinite, immense, in which the Creator is reflected. But Nature is to me so real, so intelligent, so divine, that I readily understand, and without difficulty excuse, him who might accuse me of confounding her with her God.

Yes, gentlemen, it is seductions such as these, which, in all time, have fixed the souls of men of reflection on the spectacle of the germination, flowering, and fructification of the plants of the garden. Shall I cite PYTHAGORAS, who inculcated it upon his disciples as a precept of wisdom, to worship *Echo* in her rural haunts; SCIPIO, at *Linterna;* DIOCLETIAN, renouncing the empire of the world for the cultivation of lettuce in his garden at *Salona;* HORACE, at *Tibur;* CICERO, at *Tusculum*, or beneath his orange trees at *Gaeta;* PLINY, describing for posterity the plan of his alleys bordered with box, and giving a list of his fancifully trimmed trees and vegetable statues; old HOMER, recalling without doubt his own paternal garden plot, in the description he gives of the little fenced-in spot of *Laertes*, shaded and overarched by his thirteen pear trees; PETRARCH at *Vaucluse*, or on the hill of *Arqua;* THEOCRITUS, beneath his Sicilian

chestnuts; GESSNER, under his Zurich pines; Mde. DE SEVIGNE, in her garden of *Roches*, or in her park at *Livry*, rendering her gardener immortal by a touching line, worth of itself a mausoleum, in one of her letters — "Old Paul my gardener is dead, and the trees are all sad in consequence": and, nearer to our time, MONTESQUIEU, in the spacious alleys of his chateau of *Labrede*, evoking the shadows of dead empires and the spirit of their laws, like MACHIAVEL before him, and greater than he, in his rustic hermitage of *San Miniato* on the Tuscan hills; VOLTAIRE, alternating between *Delices* and *Ferney*, comprehending Lake Leman and the Italian Alps in the horizon of his garden; BUFFON at *Monbard*, knowing how, like Pliny in Rome, to enjoy, among the magnificent living specimens in his park, the magnificence of the nature which he described; finally, ROUSSEAU, whom I was near forgetting, he who desired that his remains might repose beneath a poplar on an islet, in the midst of the last garden? Ah! that man, born to a laborious station, and brought up almost in a servile state, felt, doubtless, more intensely than another, the retirements and the consolations of solitude. How often in my early youth, in the first fever of the imagination and the soul for renowned names and genius; how often have I gone alone, or in company with a friend whom I lost by the wayside, to visit his loved *Charmettes;* that small house, that narrow garden, hidden in a ravine rather than a valley of the hills of Chamberry, but shaded by the beautiful chestnuts of Savoy! How many hours, how many whole days have I not spent beneath that little arbor of vines in which he so much delighted, in thinking of him, in living his life over again in imagination, in watching the last rays of the fading day make their way through the vine leaves already died with the yellow hues of autumn; as if hoping still to find there the most sensitive, the most eloquent worshipper and observer of nature, of the vegetable creation, and of God! (Applause interrupts the orator). I should not stop, gentlemen, if I were to name all the illustrious men who have associated themselves with their gardens. In truth one might almost rewrite the history of all men of great genius, by that of the rural retreats where they have dwelt, and which they loved and rendered illustrious by their associations. So literally is man allied to Earth, whether at his birth, during life, or in the grave; and thus truly does nature reassert her place in the lives of those who would have been the farthest removed from her, and the least accessible to the simple and pure enjoyments springing from the cultivation of the soil (Applause).

And believe not, gentlemen, that those enjoyments are reserved for the mighty of the earth, to the real owners of riches, or of gardens of celebrity like those of Versailles or the Tuilleries; of which, in all time, governments have made presents to the people, in order to excite in them admiration of the power which creates such wonders, in compelling the waters, the trees and the flowers to take their places, like complaisant courtiers, around their palaces. No: there is no need of wealth, of magnificence, of extended domain, to enjoy all that God has hidden of happiness in the culture or spectacle of vegetable life. These are pleasures, which it is not given to fortune to appropriate and monopolize. Nature is never aristocratic: she has not endowed the poor with other perceptions than the rich, of natural delights; nor the idler, than the laboring man. However vast or however contracted the space devoted by man to this pursuit, his soul can only receive the same amount of delight and gratification from its pleasures. The human soul is thus constituted, because it is infinite. Yes: the human soul is endowed with such a faculty of extension or contraction, that it can overflow the universe, and, like Alexander, find it too narrow for its desires; or it can concentrate, and as it were fold itself up upon a mere spot of earth, and exclaim with the sage of Tibur, from his half acre sowed with mallows and watered by a little streamlet, "This little spot of earth is all the world to me!" Be assured that there was as much real delight, enjoyment, sensibility and tenderness in the soul of Rousseau, watching the last rays of the setting sun from beneath the foliage of his little vine-covered arbor at *Charmette*, as in the soul of Buffon beholding the rising sun break forth in his

glory above the lofty cedars of his park of *Montbard!* Be assured that the owner of thousands of acres, planted, laid out in walks and irrigated as gardens, on the hill-sides of England, of Scotland, or in the environs of Paris, has no feeling of nature more delicious, more overflowing, more pious, than you, when, on Sunday, you take your rest in your little enclosure, at the foot of some blossoming tree that your hands have grafted, near your two or three bee-hives humming in the sunshine, on the borders of the bed where you have laid down the spade, to be resumed to-morrow.

And who more than myself has felt this delight? For if you understood Latin as well as you understand the universal language of the vegetable world, I could exclaim in your midst, with the shepherd in Virgil, "*Et in Arcadia ego;*" which may be rendered, *I too am a gardener.* Yes: I too had, for the cradle of my young days, a little country garden, fenced in with a dry stone wall, on one of the arid and sombre hills which you may, from this spot, perceive in the distant horizon. There was no large extent (the more than moderate mediocrity of my father's fortune permitted it not), no majestic shade, no spouting waters, no rare flowers, nor precocious fruits nor plants of luxury: there were some narrow walks, covered with a reddish sand, bordered by wild pinks, and violets and primroses surrounded the beds where grew the vegetables which supported the family. Well: there it was, and not in the gardens of Italy, or of the great landowners of France, of Germany, of England, that I enjoyed the earliest and the most intense gratifications which nature can bestow upon the sensitive and imaginative being of a child or a young man. I now dwell amid more extensive and more artistically laid out gardens; but I have retained my predilections for the first one. I preserve it carefully in its original poverty, of shade, of water, of flowers and of fruits! Ah! when I can rescue some rare moments of liberty and of solitude from the engrossing claims of public duty or literary pursuits, to commune alone with myself, it is to that garden I fly to pass them. (Emotion in the audience.) Yes, gentlemen, you will pardon these details of the intimacy of private life: they are not out of place here. We are all fellow citizens, friends; all of the same fibre, the same flesh! Let us for a moment have in common but one soul, as we have but one country. Yes: it is in this humble enclosure, long since made desolate and empty by death; it is in these walks overrun with weeds, with moss, with the wild violets straying from their borders; it is under these old trunks, exhausted almost of their sap, but not of their memories; it is upon this unraked sand, that I still, as it were, watch for the footfall of my mother, my sisters, of former friends, of old family servants; and that, as the sun is setting, I go and seat myself against the fence facing the house, each year more and more concealed beneath the climbing ivy—plunged in reverie, amidst the hum of insects, the faint disturbance of the lizards of the old wall, that seem to me like old tenants of the garden, with which I am almost tempted to fancy sometimes I might hold communication about the days that are past. (General and prolonged signs of emotion.)

Gentlemen, it was these first pleasures of man at his entrance upon life; these early habits, this young enthusiasm of contemplation, those first tender emotions in life, in the rustic abode, the home of the family of which now the hearth is cold and extinct, that early gave me, for gardens and the simple and intelligent men who cultivate them, that predilection which brings me back so naturally and so agreeably to these annual meetings with you. The spade, the hoe, the rake, the watering pot, even the simple flower-pot in the window of the poorest laborer, are inseparably bound up in my heart with these recollections of my young life in the country, in the midst of the labors and occupations of a rustic abode and a modest garden. Excuse me, then, if I have spoken as one without knowledge. You are practical gardeners, by the labor of your hands, by study, by science: I am only one through my sensibilities and tender memories.

(The speaker then, turning to the gentlemen seated around the stand, said): And now, gentlemen, let us depart each to his

own labors. Go you, encouraged by the earnest sympathy of your neighbors and fellow countrymen; by the unanimous and touching interest manifested by the crowd, which, more successfully than any scenic representation, has filled this theatre; by that interest of the heart, which woman by her presence here evinces. Go forth to cultivate your fruits, your flowers, your vegetables, the marvels of scientific culture, in your laboratories under the noonday sun. For my part, I retire to cultivate in that old and desolate garden of my father, of which I was just speaking to you, that which a poor laborer in the domain of mind cultivates, often more exhausted with fatigue than you: study, letters, books, philosophy, history, politics; the art of governing men, of improving society, of ameliorating the condition of the people — to cause liberty and civilization to produce yet more mature and perfect fruits (Applause). But I return there, above all, to cultivate the memory of those persons and those things there loved and lost; those tender recollections of the past; those living, yet bleeding traces of a life more than half run.... (The speaker paused as if seeking some expression, or as if deliberating mentally with himself). I hesitate, gentlemen: I do hesitate. Ought I to go on? (Another pause). No: I will say no more. There is a diffidence in all profound emotions. We must not lay bare the inmost soul: there are tears which are only to be shed in the silence and the secrecy of the heart!.... I go, then, to seek again in that home of my childhood, attractions more powerful for me, for us all, than the most exquisite and odorous exhibitions at your meetings; the perfume of our recollections, the odor of the past, the voluptuousness of that melancholy which is the autumnal flower of human life! All, all these are for us, emanations, as it were, from the Earth: a far-off perception, a foretaste of those *Elysiums* and those *Edens*, of those everlasting gardens, where we all hope to meet again in bliss, those whom we loved and parted from in tears!.. All, all these which make the man who is true to nature, at whatever distance, in whatever lowliness or in however exalted station fortune may have placed him, long to return and finish his days on the spot which gave him birth, and to find at last his grave in the garden which was his cradle!

(When the speaker ceased, there was no applause; but a deep, solemn, and tender impression seemed to reign throughout the audience.)

WINE-MAKING IN THE WEST;

WITH ANSWERS BY N. LONGWORTH, TO VARIOUS QUERIES BY C. W. ELLIOTT, CINCINNATI.

Those who read for entertainment, will do well to pass to the latter part of this article, which contains Mr. Longworth's own account of some of the most interesting matters connected with vine-growing in the vicinity of Cincinnati.

I will first write a brief account of the usual methods here, of preparing the ground and planting a vineyard. The soil should be well broken up, to the depth of eighteen or twenty inches. This is usually done, in this neighborhood, with the *spade;* which is, however, expensive. A common practice is to put *all* the top soil at the bottom: this does not seem to me to be so well as to mix the top and bottom, in digging or deep ploughing.

Cuttings, or vines of one or two years growth, are then planted, in the spring or fall, in rows five feet apart, and standing four feet from each other in the row: these are cut down during the *first three years*, to two eyes or buds, only one of which is allowed to make a shoot. In the *third* year, the vines may be allowed to bear a few bunches of grapes, if the roots are strong. The vines, after the third year, are pruned away, about the first of March, to one shoot

about six feet long, which produces the crop (which shoot is always bowed or bent, to check the circulation): in old and strong vines, two of these shoots are left. Care should be taken that a spire with two or three eyes is left, near the ground, to supply bearing wood for the next year, the bearing wood of this year being then cut away: thus a succession of new and vigorous wood is secured.

During the summer, the vines are thinned of superfluous branches and suckers two or three times. Many of the German vine-dressers here cut off the surface roots, in order to force the vine to draw its subsistence from below the influence of drouths; forgetting, perhaps, that it is sometimes desirable to be above that of the flooding rains. Physiologically this practice must be injurious. It is believed by many here (of whom I am one), that the strong growing native vines will do better if allowed more room and more wood. The vineyards are cultivated, during the spring and first part of summer, with the plough and cultivator, and kept clean from weeds. Many persons crop the ground with cabbages, &c.: when this is done, the manure must be given much sooner and more plentifully, as a bearing vineyard requires much food.

The grape crop suffers principally from these two things, the spring frosts and the summer rot. In a climate like this, where the summer is long and the sun powerful, planting on the *northern* slopes is some protection from the frosts, as the vines do not break their buds quite so soon. The "*rot*" is the great evil, and, for the past three years, has been more destructive than for any previous three years. It is possible that this may proceed from one of three causes: the loss of some ingredient in the soil, say potash; the sting of some insect, like the *curculio;* or the excess of rain, with or without great heat. As to the first conjecture, it is hardly possible, as the new vineyards have rotted nearly or quite as badly as the old. As to the second, the only fact bearing upon it is the discovery in the must, by Mr. Myers (spoken of by Mr. Longworth), of a large number of mucitic worms. As to the third, the rot, for the past three years, has followed excessive rains in July and August. Dr. Flagg, two years since, found a small part of a vineyard where the rot was very slight: this had not been worked after the spring, and the ground was in such a state that most of the rains passed off on the surface. Vines planted in rows eight feet apart, in one instance, were found to be affected by rot but very slightly. Vines growing on trellises, higher from the ground and with more wood, in one case this year, held their fruit much better than the common vineyard plants. The subject has been but little investigated, and therefore all can speculate.

The varieties now used, are the *Catawba* and the *Alexander's*, known here as the "Cape" (or Schuylkill Muscatel): the former makes a white, and the latter usually a red wine. The Isabella is inferior to either of these for wine-making, and rots badly. The Ohio, Lenoir and Missouri, are not used for wine-making; though quite the best [native] wine which I have seen (and which was really excellent), was made from the Missouri. The care necessary before pressing the grape, is to pick out the unripe and decaying berries; the bunches, of course, being fully ripe before being gathered. The juice should be carefully strained (if through flannel, the better) into sweet casks; and after the first strong fermentation, the casks should be closed, and left to ferment slowly in a cool cellar until

spring, when the wine is usually fit for bottling. No sugar or brandy is now added to the best wine.

When the juice is well strained and cleared from must, there is saccharine matter enough to supply alcohol, say from 7 to 11 per cent.; which is equal to the best Rhine wines. The ordinary quality of wines made here, does in no way compare with the good Rhine wines; though a small quantity made with great care by Dr. FLAGG, some years since, was said, by good judges, to be their equal. I drank last year of a bottle of the champaigne made under the direction of Mr. LONGWORTH, which seemed equal to what is called "first quality" of champaigne from abroad. He expects this year to make 10,000 bottles.

The price at which the wine is sold, varies from one dollar to one dollar and a half the gallon. It is mostly drank here, before being bottled, by our large German population, who, if not 'natives,' do what can be done with patience and industry to raise and consume the native wine.

It appears from a Report (made by Dr. FLAGG) published in the *Cincinnati Horticultural Society's Transactions*, that in the year 1845, (which was not a favorable one,) there were made, from 114 acres of vineyards, 23,219 gallons of wine — about 200 gallons to the acre. In successful years, the yield is from 500 to 600 gallons the acre. At the present time, something over 300 acres in this county alone, are under cultivation as vineyards. So far, vine cultivation has surely been a profitable one.

The following is a table, furnished by Mr. W. RESOR, of this place, from memoranda kept by his father through nine years. The expense of cultivation previous to first crop, also of press and casks, are not added.

ESTIMATE.

2300 vines, at 6 cents	$138 00
2300 poles, at 2 cents	46 00
1000 do. replaced, at 2 cents .	20 00
Trenching ground and planting..	80 00
Manuring last fall	30 00
2 months work each year, 9 years,	225 00
Extra work in making wine.....	150 00
Interest on investment before crop,	15 00
	$704 00
CR. By 4300 gallons wine, at 75 cts.	3229 50
	$2525 50

The following answers, by Mr. LONGWORTH, to various queries which I submitted to him, contain a good deal of valuable practical information, which I submit to your readers. C. W. ELLIOTT.

Cincinnati, Nov. 29, 1847.

.....

1 *Q.* When did you commence your wine vineyards?

A. It is twenty-five years since I planted my first vineyard, on Baldface creek, four miles below the city, under the charge of a German of the name of Amen. He had a lease for ten years, and, the tenth year, made, by the sale of his half of the wine, 800 dollars. He went on the land without a dollar, and devoted more time to cabbage and sourcrout than his grapes, as they yielded an immediate profit which was all his own. The 800 dollars ruined the old man. He moved to the center of the State, bought a farm, and planted a vineyard. His grapes were killed by the frost; and he returned, about five years since, nearly pennyless, and began a new vineyard on a small piece of land adjoining his old one. It was not till I had fully tested the experiment at this vineyard, that I increased my vineyards, and now have between 90 and 100 acres in grapes.

2 *Q.* With what grapes did you commence?

A. At the commencement, I planted largely with the "Cape" grape, (Alexander's, or Schuylkill Muscatel,) as this was the only grape found to succeed at Vevay. They fermented its juice on the skins, and made from it a rough, hard wine. I pressed

the grapes as soon as gathered, and made from it a wine resembling the Teneriffe.

I also tried the *Isabella* extensively, but soon ceased to cultivate it. It ripened and rotted badly, and made an indifferent wine; unless where from 24 to 32 ounces of sugar were added to the gallon, when it made a delicious sweet wine.

I obtained the Catawba soon after, from Major ADLUM; and, on its acquaintance, soon rooted out the Cape and Isabella. The Cape seldom rots, and is a sure bearer.

The *Mammoth Catawba* was a single plant, discovered in the center of my first vineyard. Of its origin I know nothing, and have never heard of it at any other place. I subsequently cultivated the *Missouri*, Herbemont, Madeira, Lenoir, Ohio, and some others, and tested their bearing character and value as wine grapes.

3 *Q.* The French and Madeira vines, were they tender or worthless?

A. Of foreign grapes, I imported several thousand of all the best wine grapes of Madeira, France and Germany. My last importation was 22 varieties (say 5000 plants) from the mountains of Jura, where the vine region suddenly ends. I gave them the best southern exposure on sides of hills, and expended 200 dollars on $\frac{1}{6}$ of an acre of ground, on a sidehill with a southern exposure, in my garden. I took out the natural soil to the depth of three feet; laid a layer of gravel in the bottom, two inches thick, and over it a layer of thin paving stone, and filled it up with rich earth with a portion of sand added, and a drain to carry off the rain from the bottom. They grew slowly, were subject to mildew, and, though covered in winter, would not succeed in our climate; and not a solitary plant of them is left in my garden or vineyard, except one plant of the *Meunier* (Miller's Burgundy).

In the South, foreign grapes have not succeeded much better. Messrs. HERBEMONT, M'CALL and GUIGNARD, all intelligent men, tried them extensively in South Carolina, and wrote me they did not suit their climate. These gentlemen are entitled to great praise for their exertions, in testing the quality of grapes for wine. I corresponded with them for years. I believe Mr. GUIGNARD is the only survivor. At that time, we added sugar to our *must*. In that latitude, I should have supposed the grape would have had more of the saccharine principle, than in ours. To my surprise, Mr. M'CALL wrote me that he put 30 ounces to the gallon; and in one case, where he put $26\frac{1}{2}$ ounces, found it not sufficient. Messrs. GUIGNARD and HERBEMONT used less, but more than was customary here; and Mr. HERBEMONT complained to me that his wine often turned to vinegar.

The *Ohio* grape I tried for wine one year, and did not admire it. I was equally unsuccessful with the *Lenoir*. I made from it a white wine. It is said to make a good red wine. The *Missouri* makes a good wine, resembling Madeira. I follow the custom in Madeira, and add brandy to this wine.

Many contend that the *Lenoir* and *Herbemont* are the same. My tenant, S. W. WRATTON, who has cultivated them both extensively for ten years, has this opinion. Their fruit much resembles each other. The *Herbemont* I prefer. The *Lenoir* is of more vigorous growth. The *Herbemont* has a different colored wood: its wood is dark-colored; the *Lenoir*, light-colored, with a light blue cast. The terminal leaves of the *Herbemont* have a red or brownish cast; the *Lenoir*, green. Both are hardy, and subject to rot: both are fine table grapes, and the *Herbemont* makes a fine wine.

The *Missouri* is, for the table, about equal to the *Miller's Burgundy*, which it resembles. The *Ohio* is a fine table grape. All are hardy, and free from the hard pulp common to most of our native grapes. The *Lenoir* is generally more compact in the bunch, than either of the others. The *Ohio* bears the largest bunch of grapes: it requires to have the bearing wood left long, and a plenty of sun and air.

4 *Q.* Can you give the origin of the *Ohio* and other native grapes?

A. The origin of the *Catawba*, *Herbemont*, *Ohio*, *Lenoir* and *Missouri*, will soon be an object of interest. Strange as it may appear, no certain account can be obtained of either. The *Catawba* was found by Mr.

Adlum, in the garden of a German near Washington city; where obtained from, he knew not. It is certainly a native; and it is said that one exactly similar was found near a town in Pennsylvania, which they named after the town: the name I do not recollect. The leaf, the stem, the aroma, proves it of the *Fox* family. I have had native grapes sent me from different points, almost exactly similar; but the wood is of less luxuriant growth, the bunches and fruit not quite as large, and not as abundant leaves. Where seedlings are raised from this grape, they evince a disposition, not to improve, but to go back to the type — the parent *Fox*. We have raised some white grapes from the seed. I have seen no seedlings equal to the parent.

It appears Mr. Adlum had a proper appreciation of the value of the *Catawba* grape. In a letter to me, he remarks, "In bringing this grape into public notice, I have rendered my country a greater service, than I would have done, had I paid the national debt." I concur in his opinion.

The *Lenoir*, Mr. Guignard wrote me, was a native grape of Sumner county, in South Carolina. Mr. Herbemont thought that the *Lenoir* was believed not to be a native of Carolina, but to have been raised from a seed of a foreign grape, by a person of the name of *Lenoir*, near Statesbury, South Carolina.

The *Herbemont* was originally supposed by M'Call, Herbemont and Guignard, to be a native of South Carolina, from its hardy character, and the resemblance of the plant to some of their wild grapes. They were compelled to abandon this belief, and to consider it a foreign grape of the *Pineau* [*Burgundy*] family. For the grape was first got from the garden of Gen. Huger of South Carolina, where it was called an English grape, and was said to have been imported about the year 1797. Mr. M'Call assured me that he imported the same grape from Madeira; and a French gentlemen, who imported what he supposed different grapes from France, declared they were all the *Herbemont*. This I doubt: a common observer would pronounce the *Herbemont*, *Lenoir* and *Ohio*, all the same grape, judging merely from the size of the berries.

The *Ohio* grape cuttings were sent me in a segar-box; by whom, or where from, I could never learn. Mr. Affleck, of Washington, Mississippi, writes me it is identical with their *Jack* grape, which he says was raised from the seed of a foreign grape, by a Spaniard or Portuguese of the name of *Jack*. Another correspondent writes me, its proper name is the *Jaquish* grape, from having been raised by a person of that name from seed. I received two plants of the same grape from Biloxi, Mississippi, where it is cultivated as a native grape; but the gentleman from whom I got it, says it is not the *Jack* grape. I hope soon to have the *Jack* grape, and be able to settle this point. The *Ohio* grape is of no value in the neighborhood of Boston. [It also proves inferior to the *Elsingburgh* here, Ed.] It does not even succeed well out of our city: the reason I know not. Mr. Prosselet, a French gentleman of Natchez, imported vines from France, which he states were identical with their *Jack* grape.

The *Missouri* I got from the elder Prince, as a native of Missouri, more than twenty-five years since. His son recently sent to me for cuttings of it. Here it is a delicate grower. In Newark, New-Jersey, in a poor soil, it grows very luxuriantly, and bears well, and is hardy.

5 Q. How much champaigne wine did you make last spring? What addition is made to the pure juice? How much will you make next spring? At what price will it be sold, and when offered for sale?

A. I made about 6000 bottles last spring. The best of loaf sugar is the only article added to the wine. Where we make a dry sparkling wine, no addition is made. The wine is better, for having a portion of old wine added to the new. Another objection to making it wholly of new wine is, it is apt to break the bottle. It requires experience, to know what quantity of old wine can be safely added. We shall be compelled to throw 2000 bottles back into the cask, as too much old wine was added; and the consequence is, the wine has not sufficient life. Last season, the early promise of an abundant crop of grapes was truly flattering; but the rot came, and our vine-

yards did not average one-fifth of a crop. I expect to make 10,000 bottles next spring.

I saw it stated by a correspondent in the *National Intelligencer*, that there were "several manufactories in Cincinnati, for the manufacture of champaigne wine, in charge of Frenchmen, obtained from France." This is an error. Mr. MILLER had some champaigne wine made at his house in the vicinity of the town, last season, by one of our Germans. It was made, and drank in a few weeks after working. It was not calculated for keeping, or sending to a foreign market, though much admired by those who drank it. In a few weeks it formed a sediment, and in a few months lost all its life. He commenced the manufacture late in the spring, at the time when my wine cooper deemed it too late to continue the manufacture; and used fire heat, to bring it into its effervescing state. My manufacturer keeps it in a cold arched cellar, and continues for near a year to draw off the sediment, and does not deem it fit for use till it has been a year in the bottle. The same German, this summer, commenced making, for Mr. MILLER, 40,000 bottles; got in a passion, and left the whole on the cellar floor. This wine was in great demand at our coffee houses.

Mr. MILLER has a fine vineyard, and understands the cultivation of the grape, and the manufacture of natural wine from them. Mr. SELVES, this season, employed an Englishman to manufacture champaigne wine for him, for sale at his coffee house, who for years was engaged in the same business in London. It is fit for use in a few weeks after bottled, and is deemed a fine champaigne by our wine drinkers.

My wine cooper is a Frenchman, bred to the business (as he says) in Champaigne; and who, for the last few years, has resided in the city of New-York, and been exclusively engaged in the *resuscitation* of imported champaigne, by the importing houses. His skill is yet to be proved.

One thing is certain: If a pleasant champaigne can be made from our *Catawba* grape in two or three weeks, a *good* one can be made, by a skilful wine cooper, after a year's attention to the bottles. Whether the one I now have is skilful, time will decide. The person I obtained from France in 1845, was drowned in the Ohio a few days after his arrival.

My own impression is, that in skilful hands, our *Catawba* will make a wine, superior in aroma and flavor to the best French champaigne imported; or that manufactured in London, from *perry;* or, in New-Jersey, from *cider*, or *green corn*. The aroma of the *Catawba* grape continues in the wine, in all its stages. Our Germans did not at first like this peculiar muscadine aroma and flavor, but now give our dry Catawba wines a decided preference over the wines of Germany. In the fermentation of most wines, the aroma of the fruit is lost in the fermentation of the must, and a new flavor given: often an artificial one is designedly added; and so fond do we become of particular flavors, from long habit, that many of our winebibbers are delighted with the skin-taste acquired by the wine by being carried in fœtid goatskins.

My wines will be ready for use in the spring, and for sending abroad in March. It would soon lose its good name, should it ever obtain one, if sold below the price of imported French champaigne. We judge of the value of an article from its cost. Mr. MILLER and Mr. SELVES sell their wine at twelve dollars per dozen (bottles returned), and, at this price, have found a ready sale. If my wine does not compare with the best imported, after giving the manufacture a fair trial, I shall discontinue it. Persons having it for sale, will be instructed to pay back the money on return of the wine, after the person has tried it, if dissatisfied; or if any bottles in a basket be found not good, to return the price for all that do not prove of the first quality. I calculate all will be good, or none; but a chance cork, though rarely, may destroy the wine.

I made the first champaigne five years since. It was in part produced by chance, and induced me to erect a building for its manufacture, and to send to France for a manufacturer. I shall be content if we can always make as fine a wine by design, as was then made by accident.

6 *Q.* What, in your opinion, is the cause of the rot in the grape?

A. The general answer to this question will be, much rain in the heat of summer. I believe this, as much as I believe the blight in the pear tree is occasioned by the atmosphere. For the first century after the pear tree was common in the United States, we had no blight; yet we then had similar weather, to what we have had since the blight made its appearance. It is of late years, only, that the rot has been so destructive among our grapes. For years, the blight has given us but little trouble, and the yellows in the peach trees has disappeared. One thing is certain, if we had little or no rain, after the grapes are fairly forward, we should see but little of the rot. Certain it is, it is continued rains, followed by a hot sun, that causes us to look out for the appearance of the rot. If an insect be the cause, may not rain and a hot sun bring them to life?

I will name a circumstance at the vintage of 1846, at my vineyard, under the charge of Mr. Myers, a skilful vinedresser, which he pointed out to me. He expected to make 2000 gallons of wine: the rot came, and he made 35 gallons only. He noticed no worms in his grapes or about them. As soon as the *must* was deposited in the tub, he saw a white scum over it. He took it off, and in quantity it was more than one quart. He found it to consist of white worms, so small as scarcely to be discerned by the naked eye. N. Longworth.

EXPERIMENT ON A DISEASED PEACH TREE.

BY T. A. S., SYRACUSE, N. Y.

In the fall of 1844, Judge G. L. of this village procured a few peach trees from New-Jersey, which were planted in his garden the spring following. During the seasons of 1845, '46 they grew well, and all appeared equally healthy. Last spring they came finely into bloom and leaf; but one of the number, soon after the fruit had set, manifested derangement in some of its vital functions; the leaves becoming yellow and drooping—presenting an appearance more indicative of the autumnal than the vernal season. The change was somewhat sudden; and the malady, whatever it was, appeared to be making rapid strides. Nurserymen, amateurs and others, were called in to examine the tree, some of whom pronounced it to be affected with the "yellows," and recommended its exterpation lest the other trees might imbibe the contagion.

At this stage, the tree was passed over to my hands for "experiment." The report of M. Brongniart on the action of the salts of *iron* on vegetation, (contained in your journal for April last,) suggested the use of that metal in some form. As the readiest means, resort was had to the oxide; a small furnace near by furnishing this material in abundance from the filings of the finishing room, which having been thrown out and exposed to the action of the atmosphere, had become a mass of *red rust*.

The earth was removed from the tree (about the trunk) down to the main roots, over a circle about a foot in diameter, and a peck measure or more of this oxidized mass placed around the tree and immediately in contact with the roots thus exposed. A pail of water was then poured over the material, and the earth replaced.

About the 4th or 5th day after the application, a perceptible change had taken place along the main arteries of the leaves, which had assumed a deep, healthful green, the partial and distinct change giving to the foliage a singularly variegated appearance. From this period the alteration was marked

and rapid, till at the end of ten or twelve days the tree had apparently quite assumed its natural or normal condition. On examination, however, it was found that the young fruit had become injured, and had remained nearly stationary in size, presenting much the appearance of the *cast* fruit of the peach, of a lifeless texture and drab colour. The tree, however, retained its fruit during the season, though its growth was scarcely perceptible from week to week until after the middle of September, when the *stoning* process had probably become partially perfected; after which period the fruit swelled off somewhat rapidly until the latter part of October, when it was checked by the frost; some few specimens became slightly coloured, but all immature and worthless. The tree, however, had made a fair growth of wood for the season, appears well stocked with fruit buds, and retained its foliage some weeks longer, and in a fresher condition, than other peach trees planted in the same grounds.

I send you the foregoing facts, to be made such use of as you may think proper. Perhaps they may suggest a remedy for the "yellows" in the peach tree—a malady with which I am unacquainted, unless this case has afforded an instance of it. Your large experience and more extensive knowledge on such subjects may be able to ascertain the nature of the disease, and the effect or action of the remedy applied.

Yours, &c., T. A. S.

Syracuse, N. Y., Dec. 6, 1847.

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[We are obliged to T. A. S. for the foregoing account of his experiment. It is interesting, as corroborating M. Gris' views of the beneficial action of iron on the health of diseased foliage. We have ourselves repeated this season some of M. Gris' experiments with sulphate of iron (copperas) with excellent results; and there is little doubt that almost all diseases of the foliage (including the "yellows" in the peach,) if taken at an early stage, may be cured by its use—following the proportions laid down by that writer in our last volume, p. 471.

Our correspondent administered a pretty large dose of oxide of iron to his patient; though from its being kept in a small circle near the trunk it does not appear to have produced, as yet, any bad effects. The fruit was probably injured past recovery by the diseased state of the sap before he made his application of iron. We shall be glad to have any accounts from T. A. S. or others of further experiments. Ed.]

A VISIT TO THE JARDIN DES PLANTES AT PARIS—NO. II.

BY S. B. PARSONS, FLUSHING, L. I.

Warned by our failure at the previous visit to obtain admission to the greenhouses and conservatories of the garden, we took the precaution to send a note to M. Mirbel, the Professor of Culture, who politely sent us a ticket of admission to every part of the establishment.

Our route now took us by the flower market, and numerous small shops, where bouquets of varied beauty and price greet the eye. Entering the garden, we first visited the *Orangerie*, which was now mostly filled with large specimens of greenhouse plants. The light was admitted only by upright sashes in front, and by occasional skylights in the roof. We noticed here a

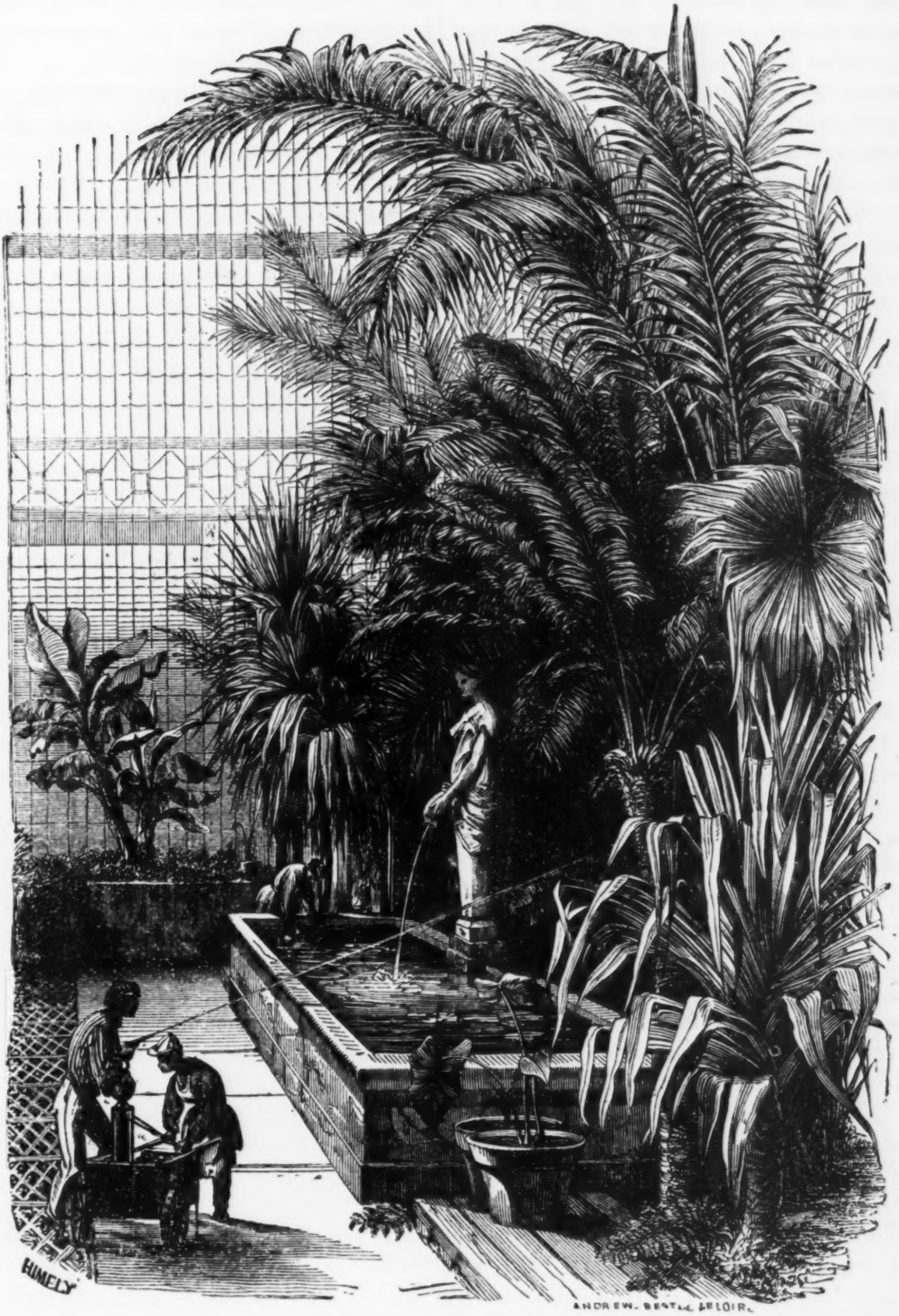

Fig. 40.—*Interior View of a Hot-house in the Jardin des Plantes.*

very large and beautiful specimen of *Araucaria excelsa*, plants of the *Banksia præmorsa* or New-Holland orange, *Palme de Sicile*, a *Pinus longifolia* 10 feet high, *Araucaria brasiliensis* 12 feet, *Araucaria imbricata* 30 feet, *Eugenia myrtifolia* from New-Holland, *Metrosideros floribunda*, *Pinus casuarina*, an Orange tree 20 feet high, with a trunk 6 inches in diameter; with a variety of Acacias and other plants. The boxes and pots were kept very clean, but there was not that systematic mode of arrangement which might have been expected.

We next visited the hothouse for tropical plants, which is about 50 feet high. Here were some fine specimens of the *Banana*, the *Brownia grandiceps* (a large variety of Palms,) *Arenga saccharifera* 30 feet high, *Gastonia palmata* (a plant from the East Indies, with a curious hand-shaped leaf,) *Areca rubra* with leaves 6 feet long, a *Cactus* 40 feet high, and *Bambusa arundinosa* 45 feet high.

Immediately opposite this house, and on the other side of a main walk, was another house of the same form, in which we noticed the *Begonia incarnata* with a beautiful flower, *Begonia muricata*, *Arum cordifolium*, *Acacia arborea*, *Ternstræmia*, very large Camellias, and the *Klemia hawortii*, a very curious plant. Immediately over these, and in a sort of gallery, was a collection of smaller plants, among which we noticed the *Begonia peponifolia* from Mexico, bearing clusters of white flowers, with a glossy leaf 22 inches in diameter.

These houses were both warmed with hot water, and, although containing many rare plants, did not present at that season a very splendid appearance. In one of them was a statue of a woman, pouring, from a pitcher in her hand, a constant stream of water into a basin below, which furnished a supply of tempered water for the plants. Both houses were of an imposing style of architecture, totally differing from any horticultural buildings we saw elsewhere.

The library and galleries next claimed our attention. The former is composed of works on every branch of natural history, to the number of some 30,000. The most interesting of its contents, are the manuscripts, with original designs and beautiful paintings of fruit and flowers upon vellum. These number some 6000, and are valued at two millions of francs. Among the professors attached to the library in the latter part of the 18th century, were the brothers Redoute. One of these, known for his works on the Lily and the Rose, was a very beautiful and correct painter of flowers. This idea of having a painter for the most beautiful flowers and curious plants of the field and garden, belonged to Gaston of Orleans, the proprietor of the garden of Blois, and the first prince of the blood who pursued horticulture with the zeal of a savant, and with royal expenditure. In his garden, the office of painter was made quite as important as that of gardener in chief. His painter of flowers was named Robert, a laborious and exact artist, whose collection of paintings on vellum was bought by Colbert for the King, on the death of Gaston in 1660. In the steps of Robert followed Vanspændonck, unequalled in coloring, but often wanting exactness. Redoute's paintings seem to combine the excellencies of both the others, escaping their faults. He is said to have studied plants as a surgeon studies the nerves, tendons and arteries of a human body; and nearly all his time was spent in the garden in summer, and in the greenhouse in winter. His lectures are said to have been crowded with all the beauty and grace of Paris, who came to learn some of the simple mysteries which surround the formation of a perfect flower.

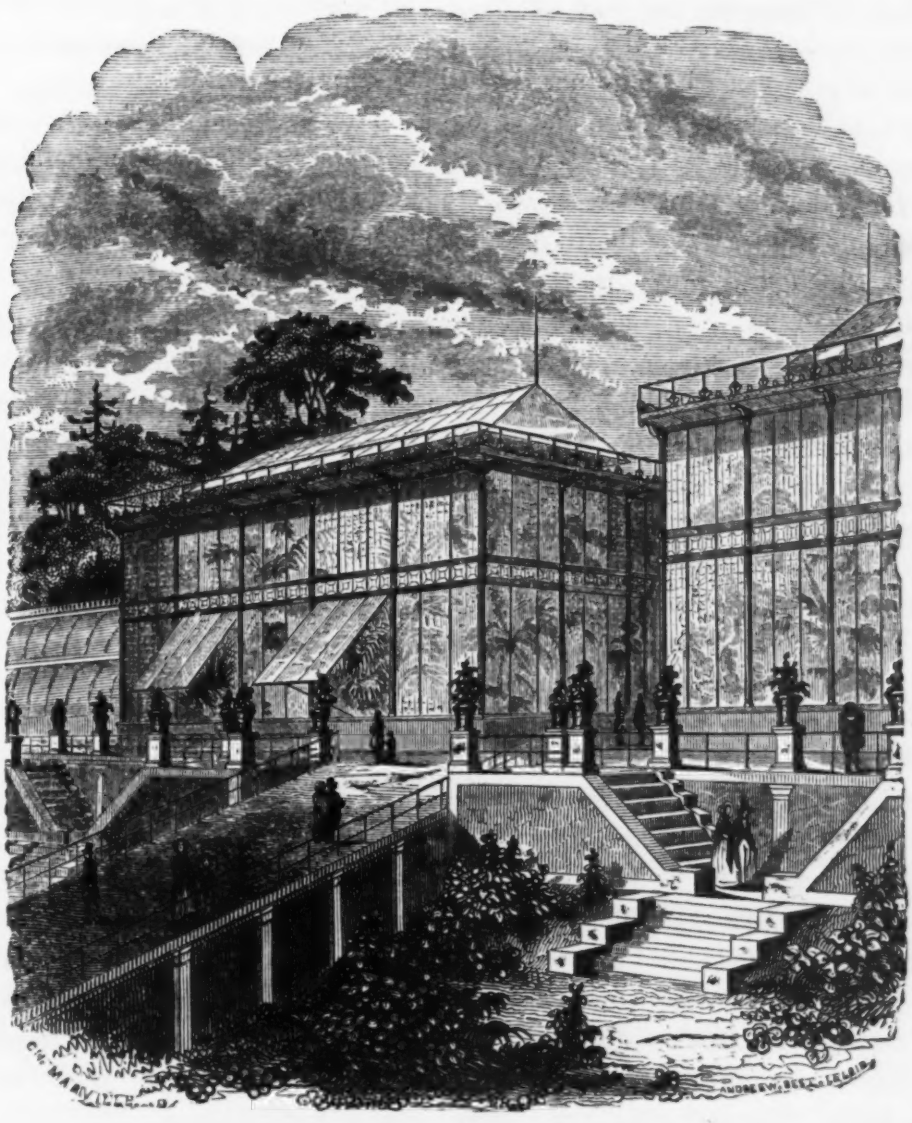

Fig. 41.—*Outside View of the Hot-houses in the Jardin des Plantes.*

When lecturing upon this great branch of natural history, of which he was the Titian and the Raphael, he is said to have been very eloquent, and to have displayed in glowing colors every detail in the delicate anatomy of plants.

To the labors of REDOUTE are thus owing a large part of the valuable collection of paintings in the library of the Garden of Plants. The Museum of Natural History, with all its galleries, is perhaps the most complete existing, and open to the public with a liberality which might well be copied by other nations. The most rare and valuable specimens, and very complete catalogues, are at the disposal of the visiter or student, of whatever nation he may be; and many of our own countrymen have been indebted to French liberality, for advantages which could not be obtained at home.

There is not a little truth in the boasting remarks of a French writer, that "it is France that is great and generous. She knows not that narrow egotism which locks up useless wealth, and which denies the the light to those who come to read at her

lamp. She comprehends the true fraternity of nations, and perceives that science is neither to be restrained by man nor limited to empires. Here, in the dominions of nature, she looks at the rights and needs of humanity together, and deems it a crime to deny a free communication of those treasures of science which may prove useful to the human race."

The Gallery of Zoology occupies a building nearly 100 feet in length, and three stories high. The third story contains the collection of mammalia, about 1500 specimens. The second contains the birds, of which there are nearly 6000 specimens, all beautifully prepared, and presenting a brilliant show of graceful shapes and gorgeous plumage. An ornithologist would here lose all recollection of the external world. On the first floor is perhaps the richest collection of reptiles existing, mostly preserved in spirits of wine, and including tortoises, frogs, &c.: of these there are nearly 2000 specimens. The collection of fishes comprises about 5000 specimens, either preserved in spirits of wine, or their skins dried, stuffed and varnished. By this last mode the colors are retained remarkably well, and give a better opportunity for inspection than when preserved in spirits of wine. When residing in the tropics some few years ago, we were frequently struck with admiration of the brilliant and gorgeous colors of the fishes of that region. A friend, some time after our return, kindly sent us a collection of the finest, prepared in this manner, with their skins dried and stuffed; and they are now in perfect condition.

The entomological collection numbers about 25,000 specimens; and there is a very beautiful collection of shells, corals, sponges, &c.

The whole number of specimens in this building is said to be 150,000; and the arrangement is very perfect, exhibiting every stage of animal organization from the sponge to man.

The Cabinet of Comparative Anatomy occupies another building, and was prepared and arranged under the direction of Cuvier. In one room are skeletons of various marine mammalia; in another are skeletons of the human frame, mummies, dwarfs, skulls, &c. In another are detached bones, for the purpose of study; and others contain every variety of animal organization, bones, muscles, &c. A collection of brains and eyes is contained in phials, as also the bones of the ears of all animals. In a glass case, we noticed a model in wax, of the hen; exhibiting the several stages of formation of the egg, and the internal organs. In one room is a collection of skulls and casts of distinguished characters, very attractive to the phrenologist. There are hundreds of other things which want of time and space will not permit us to mention here, but which were highly interesting.

The largest and finest building is devoted to the galleries of mineralogy and geology, and the botanical collection. It is nearly 500 feet long, 40 wide, and two stories high, resembling in appearance a large cathedral. Here we found fragments of mountains, specimens of various soils, minerals taken from the lowest parts of the earth, specimens of the various strata, and mammiferous fossil remains. On specimens of rocks are shown the gigantic footsteps of animals which no longer exist, and other objects of interest, which present to an intelligent mind not merely a resting place for the eye, or a pleasant occupation for an idle hour, but indubitable evidence that, amid all our knowledge of the past, and the vast progress in science and art which the last few years have seen, man is still but on the threshold of knowledge; and the

little that he is permitted to see, is but to convince him of his own ignorance, and the minute detail and inconceivable vastness of the creation.

The Botanical Gallery is very interesting, and contains some 350,000 dried specimens. Those from New-Holland, the Cape, India, Egypt, &c., are arranged by themselves; as are also those of Michaux, De Candolle, Humboldt, Tournefort and others. In one part is a very large collection of every variety of wood, with specimens of the roots, bark, epidermis, &c. There is a large collection of fruits preserved in spirits of wine, and another of fruits from all climates in wax and plaster: these last were well executed and colored, and to us exceedingly interesting. There is a large collection of seeds, drugs, and fossil plants. The woods, fruits and grains number some 4500 specimens.

Many of the specimens in these various galleries have been collected during the present century, but a large portion of them existed previous to the Revolution. Amid the insanity which then seemed to characterise the French people, and their absolute hatred of every thing bearing the scent of royalty, it is somewhat remarkable that the Jardin du Roi, as it was then called, should have escaped destruction. The people wished to have, however, entire control of it, but were opposed by Bernardin de St.Pierre, who was then director of the garden. To their threats, he replied that it had been confided to him by the King, and he would be faithful to his trust. The people returned that they were the rulers, and that nothing should prevent their enjoying their own trees, plucking their own flowers, eating their own fruit, and roasting their own pheasants and partridges. This was reasoning unanswerable; Bernardin de St. Pierre replied by inviting the citizens of the faubourg to mount guard in the garden, with musket and bayonet. To reward his zeal, his office was suppressed, and he was obliged to retire from the city. That he escaped the guillotine, and the garden destruction, was surprising, but was owing, doubtless, to one of those impulses of the mob, which induced them to save the beautiful lindens at Lyons. The story goes that they were about cutting down these lindens, when there appeared before the proconsuls an old woman of the city, who stated to these levellers, how, for the last fifty years, she had daily walked under the shade of those old trees; that they had seen her birthday, and she did not wish to see them die. They listened favorably to the old woman, and granted her petition, and thus were saved some of the finest old lindens that can be found in France.

There were few things in our rambles through Europe, that afforded us more pleasure than our visits to the Jardin des Plantes, and promenades through its shaded avenues, and among flowers from every climate.

It is not only here that the French government has shown its zeal for horticulture, but it has also botanical and experimental gardens at Montpelier, Toulon and Algiers, to which plants from every quarter of the world are sent for acclimatation. It may safely be assumed that this plan is of incalculable benefit to their agricultural industry, and that similar establishments would be of vast benefit to our own country, extended as is its agriculture beyond that of any other nation.

We need here two large botanic gardens, one at the North, and one in Florida. Into the latter could be introduced all plants or products that promise to be useful, and, after being acclimated there, could, if their nature would permit, be sent to the Northern Garden, and by the side of other products

from more temperate climates, exhibit their adaptation — if there exist any — to the development of the industry and wealth of our people. It is doubtless within the memory of many, that the cotton plant was scarcely known in this country, and its introduction or general cultivation deemed the wild project of some enthusiast; yet what is cotton now, less than one of our most important staples, and an article the growth of which we almost entirely monopolize. Such has been the wealth we have derived from one foreign plant. Are there no others that can be profitably cultivated here? Part of our country is within the tropics; and the banana, with other tropical fruits, can be ripened in Florida. Is it well ascertained that the tea plant, the coffee tree, the cocoa, the various spices, the caoutchouc, the Manilla hemp, and various other articles of eastern produce, cannot be also profitably cultivated in our Southern States? This is a prolific subject, and pages might be written to prove the great benefit to be derived from gardens of acclimatation. It is scarcely adapted, however, to the limits of an article like this; and we can only express our hope that Congress will not delay to act in this matter, and to give our agricultural and horticultural industry a measure of the benefits and encouragements which are bestowed upon it by all the principal European powers. S. B. P.

Flushing, Dec. 7, 1847.

LEECH'S KINGSESSING PEAR.

BY DR. W. D. BRINCKLE, PHILADELPHIA.

This fine new pear is a natural seedling, which sprung up in the family burial ground of Mr. Isaac Leech, in Kingsessing township, about four miles from Philadelphia. The tree is about fifteen years old, and has been in bearing four or five years. I did not become aware of its existence until this summer; and as it was nameless, I gave to it the name at the head of this article, in honor of the township where it originated, and the owner of the ground on which it grew. From the close resemblance of the fruit to that of the *Chapman*, it is probably a seedling of that variety, or of its parent the *Petre*. It is larger, however, than either of those kinds; and from the former, it differs essentially in being very buttery. The original trees of the *Chapman* and *Petre* are less than a mile from the *Kingsessing*.

The *tree* is somewhat thorny, and of upright and vigorous growth. The *wood* on the young thrifty shoots, is of a light yellowish green, becoming brownish olive, sprinkled with numerous gray dots; *leaf* rather large, of a bright shining green, with superficial curvilinear serratures; *petiole* long, and of a pale yellowish colour, as is also the midrib.

Fruit three inches long, and two and a half in breadth; *form* obovate, and sometimes obtuse pyriform; *colour* sea-green, covered with patches of dark green; *stem* one inch long, rather stout and somewhat fleshy at its lower termination, which is inserted usually into a flat surface, and sometimes into a slight depression; *calyx* small, in a very shallow basin; *flesh* rich, buttery, and delicately flavored. Ripe, last of August. W. D. B.

Philadelphia, Nov. 18, 1847.

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[We are gratified to publish, for the first time, the foregoing account of a fine new Pennsylvania Pear.

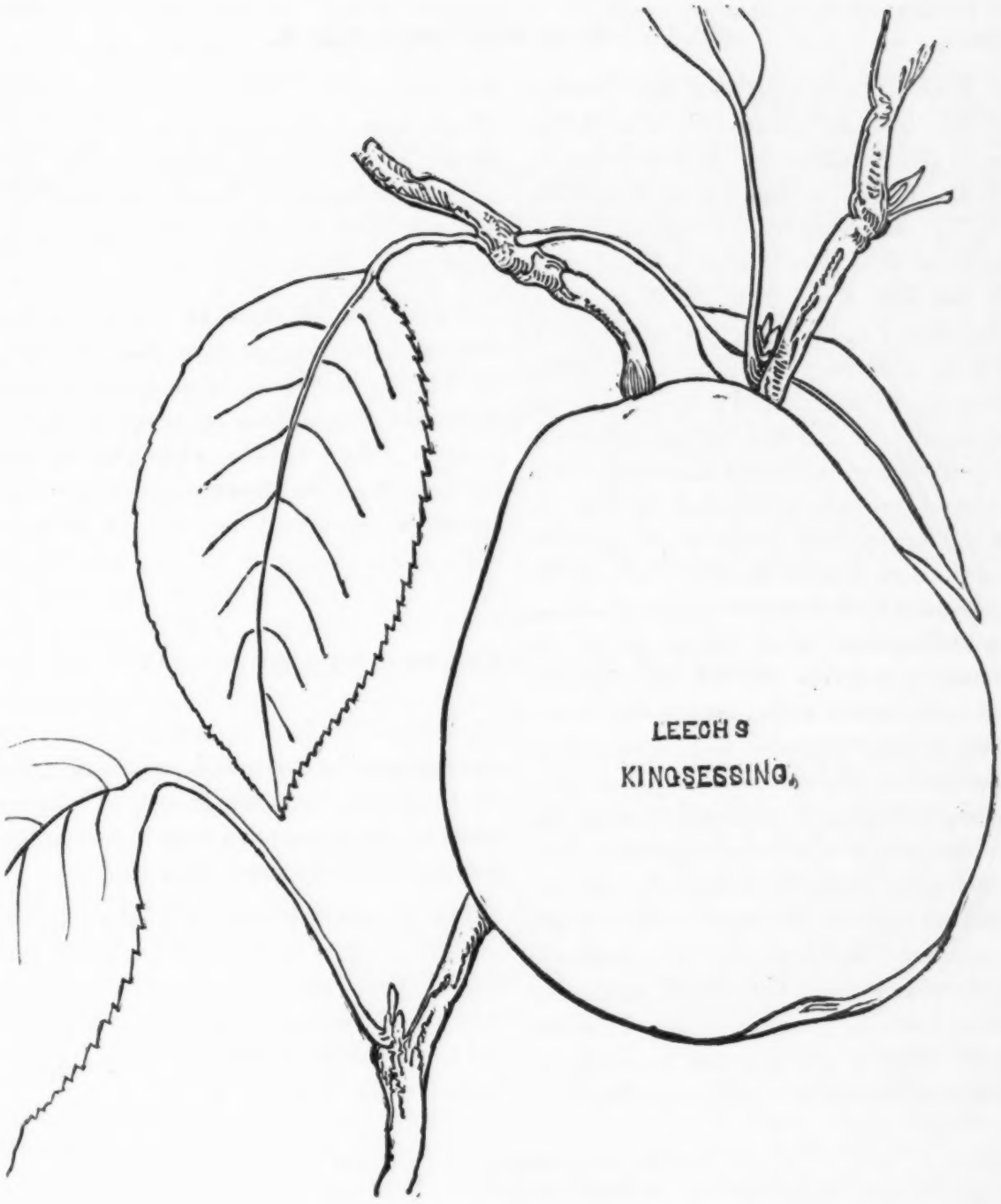

Fig. 42.—*Leech's Kingsessing Pear.*

This is the first fruit named and described since the adoption of the RULES OF AMERICAN POMOLOGY, by our leading Horticultural Societies. The Fruit Committee of the Pennsylvania Society (see report in last No. p. 295,) having decided that it is "a new seedling pear of high merit;" and Dr. BRINCKLE, who is a competent pomologist, having described it as a rich and excellent variety, cultivators may consider it a sort worthy of trial in all parts of the country. Our own opinion has already been strongly given in favor of *native* varieties of the Pear. ED.]

DESIGN FOR A SUBURBAN VILLA.

Our Frontispiece represents the elevation and plan of a suburban villa of moderate size, in the Gothic style. It is a design by E. B. Lamb, Esq., an English rural architect of ability, which we borrow with slight modifications from Mr. Loudon's *Supplement*.

In the plan of the principal floor, fig. *a*, is the porch; *b*, the hall; *c*, *c*, corridor; *d*, lobby to staircase; *e*, staircase; *f*, dining room; *g*, drawing room; *h*, library; *k*, open arcade; *l*, landing and steps down to the grounds; *m*, *m*, areas; *n*, *n*, sunk story, or sloped ground, (concealed by belts of shrubs,) to give light to the basement. The entrance front is at *a*, the side of the building opposite to that shown in the elevation. The kitchen and other offices are in the basement; and the second, or chamber story, contains six bedrooms.

The simple elegance and symmetrical proportions of this design, will please most persons at a glance. It appears to us that the arrangement of the central portion of the ground plan might be improved; and we think both exterior and interior effect would be increased by removing the chimneys and fireplaces from the *outside* walls, and placing them on the inside walls of the two largest rooms *f* and *g*; that is to say, on the sides of the rooms exactly *opposite* where they now stand. This would be retaining all the heat of the flues in the body of the house; and it would bring out the two stacks of chimneys at the top or ridge of the roof, which now emerge rather awkwardly at its eaves or lowest portion.

A villa in this style, as we have before remarked, should never be built of wood, but always of stone, brick painted some agreeable neutral tint, or rough brick and cement. The general character of the building is by no means ornate; and the ornament, where it appears, is properly introduced; that is to say, by raising the character of important features, such as doors and windows. The tracery in the windows is florid and handsome; and this and the mullions should be of carved wood, painted and sanded to resemble stone. The effect of the design would be less rich, but we think not less satisfactory, if window heads of the same form, and a less ornate pattern of tracery, were introduced.

The general appearance of the opposite or entrance front of this villa, is much like that of the front shown in the elevation here given; except that instead of the arcade, the porch would be the prominent feature of the first story.

ON THE FIRE BLIGHT IN PEAR TREES.

BY A. H. ERNST, CINCINNATI, O.

Dear Sir—The numerous theories and speculations on the *Fire Blight in the Pear tree*, and its mode of operating, have so often been brought before the public, sometimes by our ablest and closest observers in horticultural economy, that it is with reluctance I enter the field of controversy. This I do rather as a duty than a choice, and it is with due respect for the views and opinions of those who have travelled in the path of this mysterious agent to discover a remedy, that I dissent from their views.

The most prominent and generally received of these theories are, first, "*The Insect Blight;*" second, "*The Frozen Sap Blight.*"

The first was brought to notice by the Hon. JOHN LOWELL, of Boston, in 1836, by the supposed discovery of the mischievous insect. (*Fruits and Fruit Trees of America, page* 322.) The second by yourself, (Ibid, page 324,) Rev. H. W. BEECHER, and others.

To the first of these views, a ready assent was yielded, out of respect to the high source from which it emanated. It thus for a time became the popular *doctrine.* On more mature reflection and observation, it is, however, evident that the "*Scolytus pyri,*" which he saw on the diseased limbs of the trees, were attracted there by the existence of the disease, and were not its cause. This idea is, therefore, mostly abandoned, and the second, "*The Frozen Sap Blight*" theory, adopted. This, to *a limited extent*, explains the evil fully. But it is by no means the principal agent in the work of destruction. Its appearances are so very fully described in your *Book of Fruits,* page 324, that it is unnecessary to repeat it here.

There never was a more favorable year to test its correctness—one which forebode more destruction to the Pear tree, than the last. It will be remembered that the latter part of the summer of last year (1846) was peculiar for its continued invigorating showers, which set vegetation in active motion after it had almost come to a stand by a previous drouth. Moisture and growth continued until late in the fall, when it was suddenly brought to a check by freezing weather, so severe that the tops of the young Peach trees in the nursery were frozen, and many Cherry trees altogether destroyed. This was also the case with certain kinds of Pears in the nursery, as, for example, the *Washington* and the *Bloodgood;* of these I had each a row of fine stout trees, rebudded high on other sorts, and which had made fine growth and good heads. The bodies of these were almost all frozen to the ground, without seeming to have affected the tops, in most of them. While other sorts, such as the *Columbia, Golden Beurre of Bilboa, Bartlett,* &c., similarly treated and situated, alongside of the former, were unharmed. And yet there has been less Blight this summer than for many years. I have lost but one tree, with the exception of those above referred to, this summer, and that was from the effects of a previous year's injury, with which it still struggled.

On the supposition that the frost theory be *the* theory, how shall we account for its absence, under such favorable circumstances for its operation? There is no doubt that when late luxuriant growth, with the sap vessels full and extended, and an immature wood, is overtaken in this condition, by sudden freezing, it will have the effect of bursting the sap vessels and destroying the vitality of the immature wood; the effect of which may either be instant death to the whole tree, or mortality in part, just in proportion to its maturity and ability to resist the frost. And this will fully explain why its destructive effects are sometimes carried into the next summer. And, indeed, that at times, by a powerful effort of vegetation, it succeeds in apparently overcoming the mischief and throwing it off, still, however, leaving the tree an impaired constitution, with which to struggle out a brief existence.

It seems to me, then, we must look to a different agent as the cause, for what may be with us properly called the "*Fire Blight.*" This I apprehend we shall find

in the *rays* of the *sun*, as hinted at by Coxe, in his book on Fruits. All observation and experience goes to show that the month of June is the period of the year most prolific in the Blight. The reason of this is very obvious. It is the period when vegetation is in its most rapid and luxuriant growth. It is then, when nature seems fairly to have aroused from its slumbers, and to be in the full career of growth, that this growth is most tender and susceptible of injury. It is too, at this time, that the sun, as ascending to its meridian power, sends forth, between the showers, its strongest and most powerful rays. These are brought to bear with all their force, not unfrequently aided by the shower—drops of water suspended in the tree, forming so many lenses to operate on the sap in the tender branches, the effect of which is to *scald the sap*, burst their vessels, and produce precisely the same results that a scorching fire would, if applied to the limb. This, of course, produces instant death on that part of the branch or tree where the rays are brought to bear, and, of necessity, all above that point; and it will as certainly carry death below with the returning vitiated sap, (if the affected part be of considerable size) if this is not immediately amputated below the injury, or to where the vitiated sap has extended in its downward course.

It may be asked, if the sun theory be true, How is it that there has been so little Blight the past summer? This is owing to two causes; the first, no doubt, from a reduced material to operate on, previous summers having destroyed many of those most easily affected. I presume it is in vegetable as in animal life, some systems are more susceptible to the attacks of certain diseases than others. When death has removed all the former, although the cause may continue to exist, it becomes inoperative for the want of material.

But the principal reason is, the remarkably and uniformly cool and mild state of the weather during the whole of the summer. The rays of the sun being much less powerful than is usual in this climate. This fact alone is sufficient to prove the agency of the sun in producing the Fire Blight. I have not at my command a record of the temperature of the last three or four summers, so destructive to the Pear tree, but I will venture to assert that it will be found, on examination, when this stood highest the Fire Blight prevailed most. I mean, of course, in the early part of summer, when vegetation is most active. It is true, the Fire Blight prevails more or less all over our country. It is also true that it decreases as we advance *north*, until it is scarcely known. I am credibly informed that along our northern border, especially in the neighborhood of Detroit, there are Pear trees as old as the first settlement of the country, of a hundred years planting or more. I have myself seen in northern districts, large collections of Pear trees where its ravages had never been felt. When we look at the immense collections of this fine fruit about Boston and Salem, the extent of their varieties, the success with which they are fruited, and continue to flourish in the highest perfection, we cannot but feel that the same cause or causes do not exist there for the destruction of this tree. There are some sorts introduced into our region which are constantly cut off by this destroyer. Out of more than two hundred sorts that I have imported and grafted on standards, within the last fifteen years, I have not succeeded in fruiting more than thirty or forty, and can not now number over one hundred sorts of this first grafting.

The following query may here also arise

in the minds of some—If it is the effect of the *sun*, how is it that so little has been known of it till within the last few years? This query is readily answered, by the fact that it is only within a few years that much attention has been paid to the introduction of considerable collections of this fruit, and as I have already remarked, without materials there can be no action. This, too, forms one of the strongest arguments in favor of my position. I do not however design to take up your time with arguments, but to submit the facts stated, to your consideration, and that of your readers, hoping that thereby more light may be elicited regarding this discouraging malady.

If the position I have assumed be correct, the remedies that suggest themselves are simple and within our reach. The first and most important, is the selection of a class of fine Pears, the growth and organization of whose wood is of a compact texture and slow of growth. Such are found to be least affected by the Blight. As, for example, the *Seckel;* of this I have scarcely known a tree destroyed. The second, is to select for our plantations the most *northern aspect* that can be commanded. The northern slopes of hills—the northern sides of buildings—the northern sides of fences, for espaliers, etc. If proper attention is paid to these suggestions, I feel confident we shall have less occasion to lament our disappointed expectations, and as a reward for our labors, we shall enjoy this fine fruit in perfection. And there certainly is no country in the world where the Pear can be more perfectly and easily grown, than this, if our trees are exempted from the destructive *Blight*.

I remain, respectfully yours,

A. H. Ernst.

Spring Garden, near Cincinnati, O., Dec. 1. 1847.

Remarks.—We are obliged to Mr. Ernst for the foregoing interesting contribution to this still somewhat difficult subject. We have no doubt of his correctness in arguing that the "fire blight" is frequently caused by the heat of the sun in the early summer—that is to say, certain forms of the blight, and perhaps that most common in Ohio.

We are equally confident that in portions of the Western States, and in New-York, severe frost, under certain circumstances, is equally productive of this disease. And we are yet fully of opinion that the apple, pear and quince, are, in the ends of their shoots, liable to sudden blight and death from the attacks of an insect.

Another point is also entirely certain. Whether we examine the effects of the blight in the pear tree as caused by the heat of the sun's rays, or by frosts, we are irresistibly led to the conclusion that the *bark of the pear tree is more tender than that of any other hardy fruit tree;* and that many varieties, of foreign origin, are more delicate in this respect, than others of indigenous growth.

Hence, as our correspondent remarks, it is not unusual to find old trees of very large size, in various parts of the country, which have never been in the slightest degree affected by any form of blight.

It is evident, that if the more delicate kinds of pears are to be cultivated extensively in districts liable to the blight, either the bark must be protected from the action of the elements, or the constitutional susceptibility to injury must be changed, if possible, by some mode of culture not yet satisfactorily ascertained.

Mr. Ernst states that this season has been rather less marked by blight than usual, in Ohio. It has, likewise, scarcely made its appearance with us, but we learn from friends about Albany, that its ravages

have been unusually extensive and fatal there. It will perhaps tend to corroborate Mr. ERNST's theory, if we add, that we learn that the worst month, July, in that city, was marked by slight showers and very hot sunshine.—ED.

ON RAISING PEAR STOCKS.

BY JAMES WILSON, ALBANY, N. Y.

DEAR SIR—I was glad to see in the December number of the Horticulturist, Mr. NELSON's article on raising pear stocks from seed. If he has found a way by which we can supply ourselves with pear stocks, without being under the necessity of importing them, I for one will subscribe my quota toward awarding him some token of the obligations of nurseymen, for his important discovery.

If the throwing out by the frost the first winter, was the only difficulty we had to contend with here, that could be easily obviated, as the taking of them up in the fall, and *laying them in by the heels* deep, in some dry, sheltered place, or in a cellar, and planting them out in the spring, would not occupy much more time than taking up and transplanting them when the seedlings have four leaves. If dry, warm weather should prevail at the time when the seedlings are in a fit state to transplant, it would be rather difficult to succeed on a large scale. A few might be managed very well, as they may be planted in the morning or evening, and immediately watered and shaded from the sun for a few days, till they begin to strike root.

But we have a worse enemy to contend with than Jack Frost, and I believe the same evil prevails all along the Hudson valley, from New-York even to Vermont, and also about Boston. It is a leaf *blight*, that strikes the young seedlings generally about the end of August or first part of September. The beds of seedlings will ppear to look fine and promising, and all at once the leaves, in spots of the bed, will begin to have brown spots on them. In a few days the leaves will begin to fall off, and the disease will, frequently in a few days, spread over the whole bed or beds. When once this blight gets fairly hold of the seedlings, my opinton is that they may as well be dug under at once, as nothing can then save them. They will often, if the autumn proves fine, make an effort toward a second growth, but it is a fruitless effort, as they will most invariably die the first winter, under any treatment; and those that may survive the winter, will seldom, if ever, do any good. If *we can keep our pear seedling stocks growing the first season, till the leaves fall by the frost, they then are safe.*

If Mr. NELSON's plan will insure a growing, healthy condition of the leaves, etc., till the frost takes them, the discovery is just what is wanted.

Perhaps by taking extra care in preparing the soil, by deep digging and extra manuring, we may be able to obtain this desirable end.

Last year my pear stocks were a good deal blighted; this year, very little. I have been in the habit of sowing in the fall. This year I have laid my pear seeds in sand, with the intention of not sowing

them until spring. I propose to prepare my ground with extra care, and not to sow them too soon, and try what effect this course will have. I have also found where the plants stood thinly, that they were less liable to take the blight. My experience, also, goes to coroborate your opinion, that the soil must be deep, and inclined to dampness, to insure success, under the most favorable culture.

Yours, respectfully,

JAS. WILSON.

Albany, December 3, 1847.

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We trust Mr. WILSON, who is a thorough practical cultivator, will try Mr. NELSON'S mode, and give us a report. We have examined the leaf-blight of which he writes, and which is in many places fatal to seedling pears the first year. Mr. W. does not undervalue the importance of maintaining the healthy functions of the leaf in growing these seedlings, and we suggest to him and other nurserymen, in order to remedy this evil, to water the seedlings, as soon as the first symptoms of a decline in the foliage is visible, with the solution of sulphate of iron (*copperas*) recommended by M. GRIS, (vol. 1: p. 471.) This substance certainly has the most decided and beneficial action on the health of foliage, and it seems not improbable that it may completely prevent the disease in question. ED.

REVIEW.

THE ROSE: *its History, Poetry, Culture and Classification.* By S. B. PARSONS. 1 vol. 8vo. 280 pages. New-York, Wiley & Putnam.

AMONG the many stories of Roses in the East, is that of the philosopher ZEB, related by Madame DE LATOUR. "There was at Amadan, in Persia, an academy with the following rules: Its members must think much, write a little, and be as silent as possible. The learned ZEB, celebrated throughout all the East, hearing that there was a vacancy in the academy, endeavored to obtain it, but arrived, unfortunately, too late. The academy was annoyed, because it had given to power what belonged to merit; and the president, not knowing how to express a refusal without mortifying the assembly, caused a cup to be brought, which he filled so full of water, that a single drop more would have made it run over. The wise philosopher understood, by that emblem, that no place remained for him, and was retiring sadly, when he perceived a rose petal at his feet. At that sight he took courage, seized the petal, and placed it so delicately on the water, that not a single drop escaped. At this ingenious allusion to the rules of the academy, the whole assembly clapped their hands, and the philosopher was admitted as a member."

Mr. PARSONS has been more ingenious and successful than the Persian philosopher. If there is any single subject in Horticulture, which, more than any other, had apparently been written and re-written about till there was not room left for a syllable more to be said, it is that of the Rose. English, French, German, and other continental writers, had written and engraved, sung and painted the Rose, until it appeared that the topic was quite exhausted. There are also two American treatises, specially devoted to this favorite flower. We therefore took up Mr. PARSONS'S volume, with the feeling that he must be a bold man, to go over this well

beaten track, with the hope and courage necessary to fill well a large octavo volume. But the Rose, like the female loveliness of which poets always delight to make it the emblem, is an inexhaustible subject. All the novelties of the botanist and the florist, all the gorgeous and rare flowers of the tropics, all the bright and lovely gems of eastern mandarin's gardens, and all the curious and brilliant blossoming plants of Mexico, have not been able for a moment to shake the six thousand years constancy of mankind to this queen of flowers. Nay, as if to prove the vainness of even the attempt to weaken the faith of her subjects, by bringing forward the novelties of strange lands, the Queen of flowers reproduces herself every year in a hundred new forms—new varieties, if possible, ten times more lovely, more deliciously fragrant, more perfect in form, and more refined in colour than of old ; so that her wondering devotees are forced, almost in spite of themselves, to bid adieu to the familiar types — the "old roses," dear to the memory and the heart—and cultivate the new ones, so captivating are they to all the senses.

An examination of Mr. Parsons's work has convinced us that he has been highly successful in the labor he undertook — evidently a labor of love. He has not laid a mere rose-leaf in the brimful cup : he has actually placed a whole bouquet in this vase so filled by his predecessors and contemporaries, whose previous contents seem to nourish and vivify it.

The volume before us looks at the Rose in every aspect. Its *history*, from the time of the "Ancient Coptic manuscripts," down to the present day, with all the fables, mythological, scriptural and allegorical, that belong to it ; all the anecdotes of its magical charms and its wonderful influence, whether as the symbol of friendship between mighty princes, or the badge of rival factions in cruel and bloody wars ; all the details of its luxurious use among the ancients, and the scent of the perfumes distilled from it, of the value of thousands at the present day ; and every thing touching its medical properties, and its employment in ceremonies and festivals. Then there are more than sixty pages of the "Poetry of the Rose ;" a collection of all the admirable odes, poems, sonnets, and lays of the numerous bards, who have delighted to lay the homage of the muse at the feet of this favorite of nature. After this, we have a chapter on the "General culture of the rose ;" and others on "Soil and planting," "Pruning and training," "Potting and forcing, propagation, multiplication by seed, and hybridizing :" the whole concluding with both a botanical and a garden *classification*, in which the finest varieties are described.

Altogether this may be considered the most agreeable and complete work on the Rose, in the English language. The author has not only collected and arranged all of most interest and value that has hitherto been written on this subject, but he has interwoven through the volume a good deal of interesting information, drawn from his own experience and observation, which has not before been given to the public. The volume is not simply a practical treatise for the rose cultivator, but a pleasant contribution to the library of the scholar, or the book-table of the lady's boudoir.

It is not a little curious to see how much more extravagant are the oriental nations in their fondness for roses, than ourselves ; though one might reasonably conclude, from an examination of the immense catalogues of some of our nurserymen, that we were almost beset with a *rose-mania*. We quote the following paragraph from page 139 :

"The Rose is to this day also extensively

cultivated in India, and for commercial purposes, perhaps in greater abundance than is now known in any other country. Bishop HEBER states that 'Ghazepoor is celebrated throughout India, for the wholesomeness of its air, and the beauty and extent of its rose gardens.' The rose fields, which occupy many hundred acres in the neighborhood, are described as, at the proper season, extremely beautiful. They are cultivated for distillation, and for making 'attar of roses.' He states, also, that 'many roses were growing in the garden of the Palace of Delhi, and the fountain pipes were carved with images of roses.' Another writer describes in glowing colours the beauty of Ghazepoor — the Gul-istan (rose-beds) of Bengal. 'In the spring of the year, an extent of many miles round the town presents to the eye a continual garden of roses, than which nothing can be more beautiful and fragrant. The sight is perfectly dazzling; the plain, as far as the eye can reach, extending in the same bespangled carpet of red and green. The breezes, too, are loaded with the sweet odor, which is wafted far across the river Ganges.'"

On looking over the "Garden classification," we are pleased to see that, in most instances, Mr. PARSONS's descriptions correspond exactly with our own notions. The following character given to the finest of the *Bourbon* roses, (the class destined, we think, to give most satisfaction in this latitude,) we fully coincide with:

"*Souvenir de Malmaison* is altogether [all its merits considered] the most perfect and superb rose of this or any other class. It was originated by BELUZE, a Frenchman. Its flowers are cupped, and of very perfect form, very double, and with thick velvety petals: they are of the largest size, often four to five inches in diameter, and their colour a delicate blush, with a rich tint of cream. Its large and very luxuriant foliage, compact habit, and flowers of exceeding beauty, render this the very finest rose known." p. 250.

The volume contains colored plates of two of the new Roses which have elicited most admiration within the last three years, *La Reine* and *Chromatella*.

We pluck, from the wreath of poetical gems, which the author has collected together in this volume, the following, by that sweet English songstress, Mrs. HEMANS:

A THOUGHT OF THE ROSE.

How much of memory dwells within thy bloom,
Rose! ever wearing beauty for thy dower!
The bridal day — the festival — the tomb,—
Thou hast thy part in each, thou stateliest flower:
Therefore with thy soft breath come floating by
A thousand images of love and grief—
Dreams, filled with tokens of mortality;
Deep thoughts of all things beautiful and brief.
Not such thy spells o'er those that hailed thee first,
In the clear light of Eden's golden day!
There thy rich leaves to crimson glory burst,
Link'd with no dim remembrance of decay.
Rose! for the banquet gathered, and the bier!
Rose! colored now by human hope or pain;
Surely when death is not, nor change, nor fear,
Yet may we meet thee, joy's own flower, again.

THE APPLE CROP.— The inequality of the apple crop in different regions of country, the past season, is remarkable. In central Ohio, in the valley of the Hudson, and on the seaboard, the fruit has been more or less cut off; while in a large part of western New-York, it has not been so great for several years. A correspondent on Long Island states that in an orchard of twelve acres, he did not obtain half a bushel. Another correspondent in East-Greenwich gives the following account of the singular circumstances attending its destruction in that part of Rhode-Island: "We had the most meagre prospect of apples I have known for years: the rosebugs in myriads attacked the scattering fruits while not larger than a nut, and from ten to twenty might be seen upon a single fruit. They prevailed chiefly on the seaboard; and fortunately a west wind drove them into the sea in quantities, forming a winrow on shore for miles." T.

FOREIGN NOTICES.

GLIMPSES AT ENGLISH COUNTRY PLACES.—[From a very interesting letter received since our last number, from a friend who has lately gone abroad to enjoy, among other things, the perfection of European parks and gardens, (and that too with abundant preparation for this species of enjoyment,) we extract the following portions, which cannot fail to interest our readers. ED.]

I went out to *Skirving's nursery*, about three miles from Liverpool. He is a tenant of the Earl of Derby, whose place, "Knowsley Hall," is a few miles from there. Mr. SKIRVING has a nursery of 100 acres. There are forty miles of hedges—and *such* hedges and such walks—bordered by Rhododendron, Laurel, Portugal Laurel, and every species of evergreen shrub. The whole nursery is laid out in squares—of perhaps 50 to 100 feet square, surrounded by privet, thorn, laurel, beech or holly hedge, eight feet high, for protection of the plants within the hedges. I saw few *deciduous* trees; everything was *evergreen*. He has sixty-eight varieties of evergreen trees that will stand the climate of England. He showed me one patch of *Araucaria* (Chili pine,)* containing £2000 worth. This is the great tree here now; they are planting the avenues in the parks with them. I have as yet only seen specimens at Eaton Hall eight feet high; and I infinitely prefer the Deodar Cedar; one of the latter at Eaton Hall, about ten feet high, is most exquisite. Mr. SKIRVING had just sent off to the EARL OF HARDWICK, £400 worth of Araucarias and Deodars at only half a crown, 2s. 6d. sterling, a piece; something different from our orders to nurserymen. Skirving's house, formerly Walton manor, is 500 years old, and is completely covered with ivy, cut out for the windows, and abounding in hundreds of birds—singing and chattering so that you can hardly hear yourself talk. The birds are infinitely more numerous and tamer here than in America. There are beds and beds of Rhododendrons of every colour and all sizes, from 4 shillings per 100 to £10 a piece. So there were thousands of all the beautiful evergreen plants, which will scarcely thrive with us, and therefore most *tantalizing*. As I said before, I saw hardly any deciduous trees; and on expressing to him my wonder, he said the taste now was all for evergreens; and that the new parks were all evergreen trees and shrubs—so that in winter, when the proprietors chiefly reside there, the appearance may be the same as in summer. LORD HARRINGTON is even cutting down his deciduous trees and planting evergreens in avenues. One of these—an avenue of Araucarias—is seven miles long, one hundred feet broad, and the trees fifty feet apart: imagine the splendor one hundred years hence! Another of *Deodars* is three miles long.

[From our correspondent's account of *Eton Hall*, the seat of the Marquis of Westminster, we extract the following:]

The income of the Marquis of Westminster is £416,000 per annum. He does not fancy Eton Hall, and has been for two years altering the house and grounds; and the alterations will require two years more. We entered this estate by Grosvenor Lodge, a beautiful castellated building, and drove in a straight line eight miles, through an avenue of Hollies, Portugal Laurels, and our red dogwood—only about six or eight feet high—backed by trees perhaps twenty or thirty feet. This looked so new from the small size of the border, that I was disappointed. Passing another lodge, almost hidden in ivy, we drove through the park to the Hall. The latter was discoloured and moss grown, and the steps to the grand entrance grass grown. Hundreds of workmen were about the house and on the lawn, cutting up the latter in all directions, and converting what was lawn into terraces—taking up trees.

The whole of the space between the house and river—some twelve acres—is to be terraced; and each terrace is to be thrown into arabesques of flowers, vases, statues, etc. At an immense expense, all the trees remaining are to be trimmed and cut in the old style. In fact, it is to be a revival of the old *geometric* school in gardening on the side of the estate towards Wales. All the new evergreens are being planted at a great rate. I saw them planting some *Araucarias*. The hole for a tree three feet high was *ten feet across* and four feet deep. At the bottom were placed ten inches of stone as a drain; and the tree was planted in prepared soil on a hill, two feet at least above the level. The gardens—pleasure and vegetable—are sixty acres; the kitchen garden being seven acres. There is a great deal of wall; the gardens being in squares of, say an acre each. The glass houses were not better or more numerous than Col. Perkins' (near Boston,) and the grapes were certainly inferior to those I left at home, in size of bunch. There were a great many handsome *orchidaceous* plants, and an astonishing number of pine pits—perhaps 400 feet—filled with pine apples in every stage of forwardness. The pleasure-grounds consist chiefly of walks, bordered with Rhododendrons and all their evergreen plants—which, though beautiful as specimens, are uninteresting from sameness. One of the finest things on the estate is the bridge across the Dee—150 feet span, in a single arch, all iron, and exceedingly light and elegant, wrought in beautiful scrolls and arabesques. This, we were told, cost £15,000. It is this sort of thing that astonishes the Americans! There was one superb view from the west front towards one of the Welsh mountains; as high, perhaps, as Round Top (of the Catskills,) seen at the end of an avenue three miles long and one hundred feet broad, with very fine oaks on either side.

Eton Hall being comparatively new, I did not expect to see it so dark, moss-grown and stained. I fancied a light Portland stone tint; whereas, it is a sort of blackish brown, in streaks. They did not admit us, as they were tearing portions down for alterations. *Yours, S. Chester, England, Oct.* 30, 1847.

[* For a description of this tree, see vol 1, p. 540. ED.]

Sea-side Planting.—It is generally allowed that it is a great difficulty to get trees and shrubs to grow, much less flourish, on many parts of the sea coast, so as to afford any degree of interest and satisfaction. But while we admit the difficulty, I am persuaded, with attention and care, their growth may be greatly promoted, as I propose to show from two cases that have come under my observation; one on the eastern, and the other on the western coast. The difficulty arises, it is thought, from the injurious effects of the sea spray falling upon the trees: this, in my opinion, is very doubtful. About ten years ago I was engaged to fix the site of a marine villa on the eastern coast, and to lay out the grounds. The ground is in general flat, with little variation. Between the edifice and the sea there is a space of about 160 yards; the flat extends about 120 yards to a point about 100 feet above the level of the sea; the rest forms a steep bank sloping rapidly down to the sands. The nature of the ground is very stiff, with a clay bottom, but well drained. Among others I arranged a plantation of trees and shrubs from the house down to the sands. It was planted in the usual way with trees from three to four years old, set about 4 feet apart. Two years after planting, half the trees at least were dead, and the rest had scarcely made any progress at all. The whole was replanted very thickly; the trees not being more than from one to two feet apart. I visited the place about three years afterwards, and found the better half living, but very little improved. The young shoots were mostly dead and the rest dying; but on my visit to the spot a few weeks ago, I found from the shelter the trees had afforded each other by being thickly planted, many of them had attained the height of twelve feet; such, for instance, as the Wych Elm, Willow, Sycamore, common Ash, and a solitary Occidental Plane which was well sheltered by other trees, the whole having made shoots this year from two to three feet long. The Turkey Oak, Larch, Lime, Mountain Ash, Horse Chestnut and Laburnum, had attained the height of from eight to ten feet. The Spruce and Balm of Gilead Firs were healthy, and making fine shoots. Such of the shrubs, also, both deciduous and evergreen, as had survived, are now thriving well; a manifest proof that the mischief the plants had previously sustained was more to be attributed to their exposure to the unbroken north and north-east winds than to the sea spray; for I found some of the trees, although within ten yards of the reach of the tide, growing very freely on some parts of the sloping bank, wherever the soil was moderately free, and they not so fully exposed to the violence of the winds; and at the same distance from the sea I observed Strawberries really flourishing, which I was informed had been planted five years, and had produced abundantly. I may also mention, as corroborative of my opinion, that the trees on the bank sloping down to the sea at Scarborough are thriving remarkably well wherever they are at all sheltered from sweeping winds. Since, then, it is evident that shelter is of the utmost importance to young plantations on the sea-coast, I would recommend in the first place the ground to be very thickly planted, as stated above, keeping the black Spruce, Sycamore, Wych Elm, common Elder, and Willow on the bleak side; and in the next place, in the most exposed parts, I would have poles (not pleasing objects, but expedient) fixed firmly in the ground, and interwoven with good hay or straw ropes, three or four inches apart; and in other parts, such as inner clumps or plantings, the usual hurdles made of hazel or other coppice rods, would be found very serviceable. These were extensively used at a new place on the western coast, about half a mile from the sea, in a situation a good deal exposed to the west wind. Protected in this way, trees and shrubs in general succeeded well; and when the hurdles, &c., were removed in the spring of the second and third year afterwards, they appeared to sustain no injury. I would just observe, in conclusion, that great caution must be observed in thinning plantations in such localities. It is best to commence by lopping off the branches of those trees that are to be ultimately removed; then in a year or two to remove them altogether. This method would prevent the adopted plants from being too suddenly exposed, and would gradually inure them to greater severities. This plan has been adopted on the eastern coast, and after allowing the trees to afford protection through the approaching winter, they will next spring be removed altogether. *Joshua Major.—Gardeners' Chronicle.*

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Brussels Horticultural Show, Oct. 1.—I now come to the fruit rooms; here there were upwards of 80 exhibitors, among whom were the *Duc de Brabante*, *Comte de Flandres*, and *Princess Charlotte*. I had been led to expect a large collection of fruit; Flanders has the reputation of being *par excellence* the land of Pears; in it have been raised more and better varieties than in all the rest of Europe put together; I was not disappointed, for certainly finer specimens, as regarded size and form, it would be difficult to produce. I have, it is true, seen both in England and France as fine single specimens, but here you met them in almost every collection. That of M. De Bavay, of the Royal Nursery, Vilvorde, contained about 200 kinds of Pears, Apples, Plums, and Peaches. The collection of M. De Rasse, of Tournay, contained nearly 100 kinds of Pears, in which were also fine specimens; and in the collection of M. Desbuck, of Louvain, were also some very fine fruit, but he had also several very small, which gave it an uneven appearance. The exhibition from M. Louis, of Heverlé, contained very fine and large fruit, more especially of Duchesse d'Angoulême, Doyenné, Beurré d'Hiver, Calebasse bosc, Napoleon, Belle de Bruxelles, and Beurré d'Aremberg Pears. In that of M. Millet, of Ixelles, were some very large Pears, and some enormous Apples. M. Weytz, gardener to the Prince de Ligne, sent a small lot, containing, however, some very fine fruit. La Societé de Pomone d'Antoing also contributed about 100 varieties; and M. Collignon furnished 115 varieties of Pears, and the like number of different Apples, some of which were very superior, though not at all equal to those of M. Bavay. M. Rummens had a small but very fine collection of Pears and some very large Melons; that of M. Joly contained enormous fruit of Duchesse d'Angoulême,

Belle de Bruxelles, Beurré gris, Calebasse bosc, Bezi de Chaumontel, and Bon Chrétien d'Espagne. I also noticed some very handsome Pears in that of M. Meys. As it is impossible to name all the finest varieties, I will pass on to the seedling Pears and Apples exhibited by M. Bivort, of Geest, Saint Remy, in which were Beurré Kennes (Bivort,) a very handsome large fruit; No. 2794, very large; Docteur Capron, No. 2820, Marie Louise Nouvelle (Van Mons,) and a splendid fruit numbered 1011. Among the seedling Apples the following particularly attracted my attention:—Nos. 3, 7029, 7003, bright yellow, 7007, red, and 7023, a beautiful golden red. M. Ouvelx, of Huy, had also a collection of seedling Apples, in which were some very handsome specimens, but as they were not numbered I am unable to send any particulars. The Grapes were not ripe, and quite unfit for exhibition. The Pines were exhibited growing, and had nothing whatever remarkable about them. Among the Pears, one, Triomphe de Hasselt, was particularly conspicuous, from its enormous size and shape; it must have been at least six inches long, colour brownish green, and bell shaped; I only saw it exhibited by one person, M. Vandievoet.—*Foreign Cor. Gardeners' Chronicle.*

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Horticultural Exhibitions in France.—It has been a very common, long established custom, to utter pompous phrases about horticulture; we shall, therefore, take good care to repeat none here. We shall not even repeat what so many others have said before us—that horticulture is the most delightful of sciences; but we wish to remark that the art of cultivation is, at present, very much the fashion. This is a peculiarity which is worthy of note; for among the ancients, and particularly the Romans, it was at those simple and rude epochs when the arts, luxury, and the corruptions of riches had not yet influenced the age, that the cultivation of the earth was chiefly held in honor.

With us, it seems that our tastes and inclinations have pursued an inverse course to that remarked among the Romans. It was not, certainly, among our simple, and even rude ancestors, when France was deprived of all the advantages and resources of luxury, of art and civilization, that the culture of the soil was the most esteemed: on the contrary, the haughty proprietors occupied themselves very little with the amelioration of the soil, or with the introduction of new, economical species of plants, etc.; they left this duty to their serfs, upon whom they bestowed very little respect. Civilization made little change in this state of things; it did not overcome the fatal, feudal prejudices against cultivators of the soil generally.

Now, that we have passed through these various stages, and that all the advantages of civilization, all the effects of luxury, and perhaps, also, corruption, which often follows it, have destroyed in us the simplicity of our ancestors, our tastes are becoming pastoral and rural. Our homes resound with the echo of agricultural labor—we are all cultivators. Now, great landholders themselves manage their estates, (or, direct the cultivation of their own lands;) they belong to agricultural societies, to which they bring the results of their experience, and receive, in return, the experience of others, and the new discoveries by which they profit. Happy exchange—happy enlightenment—which contributes eminently to the progress of science, to the prosperity of the country, and to the well-being of society. In pursuing this task, the horticultural societies have a noble position to fill. It is from them, indeed, that we may hope for the introduction into our culture, of new species of improved qualities, as well for the food of man and of animals, as for their value in the arts, medicine, etc. The importance of these associations of horticulture is fully appreciated at the present day; and we see in almost all the principal cities of France, that horticultural societies are formed, under the patronage of illustrious men, and under the auspices of noble ladies, who wish to contribute to the progress of science by distributing medals of encouragement to those horticulturists who have distinguished themselves either by their labors, or by the introduction of new plants for ornament or utility.—*Revue Horticole.*

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Medal to M. Gris.—At the annual exhibition of the Royal Horticultural Society of Paris, a report was made by the vice president, M. Payen, on the use of *sulphate of iron* in curing the chlorotic diseases of plants (yellow and sickly foliage, etc.,) and a silver medal was awarded to M. Eusebe Gris, the young and learned chemist, who has devoted several years of study to this important subject.—*Revue Horticole.*

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The Chateau des Fleurs.—A new hall, or structure of large size and great beauty, devoted to the exhibition and sale of flowers daily, has lately been opened at Paris, which is said to eclipse anything of the kind before attempted. Delicious music, turf enamelled with blossoms, large groups and masses of plants and trees, and the greatest profusion of flowers make up the effect of this luxurious establishment.

At a leading show, held in the Chateau on the 12th of September, Dahlias and China Asters disputed the palm for variety and beauty. There were 2000 pots of China Asters grouped in masses, and all the world admired the varied colours, their form, and size of the blossoms. The finest collections of Heaths, Fuchsias, Pansies, and other plants, made up the brilliant exhibition.

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Chinese Agricultural Population.—There are few sights more pleasing than a Chinese family in the interior, engaged in gathering the tea leaves, or indeed in any of their other agricultural pursuits. There is the old man, patriarch-like, directing his descendants, many of whom are in their youth and prime, while others are in their childhood, in the labors of the field. He stands in the midst of them, bowed down with age. But to the honor of the Chinese, as a nation, he is always looked up to by all with pride and affection, and his old age and grey hairs are honored, revered and loved. When, after the labors of the day are over, they return to their humble and happy homes, their fare consists principally of rice, fish and vegetables, which they enjoy with great zest, and are

happy and contented. I really believe that there is no country in the world, where the agricultural population are better off than they are in the north of China. Labor with them is a pleasure, for its fruits are eaten by themselves, and the rod of the oppressor is unfelt and unknown.

I was one day travelling amongst the hills in the interior of the island of Amoy, in places where I suppose no Englishman had ever been before. The day was fine, and the whole of the agricultural laborers were at work in the fields. When they first saw me, they seemed much excited, and from their gestures and language, I was almost inclined to think them hostile. From every hill and valley, they cried, "*Wyloe-san-pan-fokie*," that is, "Be off to your boat, friend;" but on former occasions I had always found that the best plan was to put a bold face on the matter, and walk in amongst them, and then try to get them into good humor. In this instance the plan succeeded admirably; we were in a few minutes excellent friends, the boys were running in all directions gathering plants for my specimen box, and the old men were offering me their bamboo pipes to smoke. As I got a little nearer to the village, however, their suspicions seemed to return, and they evidently would have been better pleased had I either remained where I was, or gone back again; this procedure did not suit my plans, and though they tried very hard to induce me to "*wyloe*" to my "*san-pan*," it was of no use. They then pointed to the heavens, which were very black at the time, and told me it would soon be a thunderstorm—but even this did not succeed. As a last resource, when they found I was not to be turned out of my way, some of the little ones were sent on before to apprise the villagers of my approach, and when I reached the village every living thing, down even to the dogs and pigs, were out to have a peep at the "*Fokie*." I soon put them all, the dogs excepted, (which have the true national antipathy to foreigners,) in the best possible humor, and at last they seemed in no hurry to get rid of me. One of the most respectable amongst them, seemingly the head man of the village, brought me some cakes and tea, which he politely offered me. I thanked him, and began to eat. The hundreds who now surrounded me were perfectly delighted; "He eats and drinks like ourselves," said one. "Look," said two or three behind me, who had been examining the back part of my head, "look here, the stranger has no tail!" and then the whole crowd, women and children included, had to come round me to see if it was really a fact that I had no tail. One of them, rather a dandy in his way, with a noble tail of his own plaited with silk, now came forward, and taking off a kind of cloth which the natives wear here as a turban, and allowing his tail to fall gracefully over his shoulders, said to me in the most triumphant manner, "Look at that!" I acknowledged that it was very fine, and promised if he would allow me to cut it off, I would wear it for his sake. He seemed very much disgusted at the idea of such a loss, and the others had a good laugh at him. *Fortune's Three Years in China.*

DOMESTIC NOTICES.

WHITEWASH VERSUS PEAR BLIGHT—*Dear Sir:* In the Horticulturist for December, I observe a note from Mr. A. H. ERNST, of Cincinnati, who says that he has made up his mind that *sun* has more effect in causing the pear tree blight than either frost or insects, and joins with you in recommending as a preventive of such effect, the application of lime wash to the trunks and large limbs of trees, in order to reflect the sun's rays from them. As the lime wash was first recommended by you in the autumn of last year, and as it was probably applied by many persons in accordance with such recommendation, I wish to inquire, have you received information from which you infer that its application has prevented the blight in situations where it prevailed before the use of the lime, and where, in all probability, it would have appeared but for such application?

I have lost during the last summer, fifteen trees, (and some of the large branches from about as many more,) from the blight—not the *scolytus*, or *insect blight*, which attacks the extremities of the branch, from which many of my small trees have been injured, but from the disease which first makes its appearance on the trunk or large limbs of the tree. They all blossomed, and were in perfect health, apparently, previous to June. Some were thrifty and had made much new wood last year; others, on the contrary, had made but little wood; to all of them the lime was applied as recommended by you. Previous to this season, I never lost a tree from this disease, and never had but one tree at all affected by it. From this, I do not wish you to infer that I mean to give it as my opinion that the lime was the cause of the disease; but it is certainly very evident, from the above facts, that it did not prevent it. If the sun causes the blight, and *if the lime has the effect you expect from it*, why were my trees affected after its application? Yours very truly. *Herman Wendell. Albany, Dec.* 10, 1847.

[REMARKS.—We have, as Dr. WENDELL supposes, received accounts from several of our readers, who made a trial of the whitewash on their pear trees last autumn. But the experiments were not considered by them or us as satisfactory, because simple lime-wash only being used in all cases reported to us, (except one, where a little salt was added to the lime,) the lime was washed off from all the smaller limbs by rain storms before the winter was half gone. Hence, it was impossible, in such cases, to expect any beneficial results from it; and we recommended this autumn the addition of a little *sizing* to prevent its being washed off the smaller limbs.

Dr. WENDELL does not inform us whether the

whitewash applied in the autumn remained on his trees during the whole winter. That would be necessary to enable us to judge whether it had a fair trial, supposing his trees to have suffered by *frozen sap blight*. If Mr. ERNST's view is correct, they may have been injured solely by *sun blight;* and in this case, the whitewash, to act as a preventive, ought to have been renewed in the *spring*.

Since Mr. ERNST's article has been in type, we have received the September number of the *Revue Horticole*, from Paris. The following extract from an article which it contains on the culture of the apple, by M. BRAVY, is highly interesting, as relating directly to this subject; and as exhibiting a singular coincidence of opinion on opposite sides of the Atlantic; for Mr. ERNST could not have seen this article when his own views were written, and we do not suppose M. BRAVY had seen ours regarding the use of whitewash, though written a year or more ago:

"The apple, like the pear, is very subject to canker (*chancre*,) a disease which, as I have already remarked, is produced by the impoverishment of the soil, and the excess of moisture, or of drouth. Besides these causes, I am convinced that the too powerful rays of a burning sun (*des coup de soleil trop ardents*,) occurring immediately after a shower or cloudy weather, and striking the stem or branches still wet, often produces, in young trees, the dessication of some portions of the bark, or dry canker. What proves this, is the fact that these appearances show themselves almost always on the south side of the stem, and more especially the south-south-west side; or in common phrase, 'towards the two o'clock sun.' A very efficient means of protecting the trees is to coat them, in the spring, with a layer of whitewash. This operation, very simple and unexpensive, has additional advantages; it prevents the growth of moss and lichens on the bark, and destroys or drives away the insects which harbor there. I cannot too strongly recommend its use."

The foregoing paragraph comprises Mr. ERNST's theory of the blight, and our proposed remedy. We proposed it, theoretically, a year before the publication of M. Bravy's article; but he speaks of it as something whose practical value is well known to him; and he is considered one of the leading French horticulturists.

A word or two more touching the value of whitewash. The editors of the *American Journal of Agriculture*, Albany, in an article on this subject (July, 1847,) made the following remarks:

"We dissent from the author of this theory [meaning us,] in regard to the proposed remedy, viz., a coating of whitewash. This seems to have been proposed from a misapprehension of the nature of the coating itself; for, in fact, so far as the coating operates at all, it must promote, rather than retard, the freezing of the sap. An earthy material, of the nature of whitewash, is a better conductor of heat than the porous and partially dry cuticle itself."

Now, fortunately, the effect of whitewash is a matter not involved in much obscurity, and easily tested by experiment. It is, we believe, the point most fully conceded, that whether in winter or summer, it is the *sun's rays* which cause the blight; in winter, by sudden *thawing* after frost, as we stated; in summer by the intensity of its rays, as Messrs. ERNST & BRAVY have pointed out. Hence, what is wanted would appear to be a protection against the sun's rays. For it is the sudden *thawing* in winter, and not the freezing, as the American Journal supposes, which does the mischief.

Common sense, as well as philosophy, tells us that dark colours exposed to the sun absorb most heat, while white reflects most. Hence, it very naturally follows that the bark of the pear tree, being *brown*, is capable of being heated by the sun's rays much more rapidly and completely than if it were white. To settle this point more precisely, before sitting down to write these remarks, we took two thermometers (Fahrenheit's,) agreeing perfectly. The day (19th Dec.) is very bright, but mild, with two inches of snow on the ground. To the bulb of one of the thermometers we gave a thick coating of whitewash and allowed it to become dry; the other was left as usual.

After being exposed for an hour to the full sunshine, the naked thermometer indicated 97°—the thermometer with the whitewashed bulb only 79°. This clearly shows a difference in favor of the whitewash, as a protector against the sun's rays, of 18°. When we consider that the colour of bark is dark, and therefore, it absorbs more heat proportionately than the clear glass or bright mercury of the naked thermometer, it is plain enough that, even in a winter's day, a coating of whitewash must have the effect of preventing the temperature of the bark, exposed to full sunshine, from rising as high as it would do by 20 degrees or more. ED.]

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A NEW GRAFTING TOOL.—I herewith send you, for inspection, a new horticultural implement, which I call the *Horizontal Stock-Splitter*. Having long felt, in my own practice, the need of some improvement in the mode of splitting stocks for cleft-grafting, I last winter set myself to the task, and with the aid of a common blacksmith produced, in a few days, the article before you. It was extensively used the past spring in my own orchards and nurseries, and answered admirably the purpose for which it was intended. Its execution is easy, rapid, and altogether satisfactory. The stock is opened with a smooth, clean and uniform cut through the bark and wood, with little or no *splitting*, and to just the desired *depth*, (desiderata hardly to be secured by the use of the knife and chisel,) and of course a more perfect cleft is presented for the reception of the scion, and one which holds the scion more firmly than those produced by any former method.

To *root*-grafting, where the roots are of the larger size, it is particularly well adapted, as at least a dozen stocks can be cleft by it per minute, and the work performed in the very nicest manner. It was for this use alone that the implement was originally designed; but by variously modifying its form and size, it could obviously be applied to a great variety, not only of horticultural but also of domestic and mechanical purposes—the power of the lever and knife combined being very great, and the working of the implement, when laid in a horizontal position, very easy and rapid.

If, after having fairly examined its merits, you think it worth while to have a drawing of it prepared for the *Horticulturist*, you will please to do so, for the benefit of any gentleman who may choose to give it a trial. Yours truly, *Asahel Foote. Williamstown, Mass., Oct.*, 1847.

[This appears to be an excellent labor-saving machine for those who wish to perform cleft-grafting—the usual mode—either extensively, or very

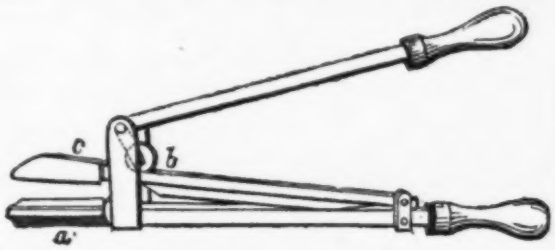

Fig. 43.—*Foote's Stock Splitter.*

nicely. A groove (sheathed with leather,) *a*, receives the stock, and a very slight application of force to the handle of the lever, acting upon the small wheel *b*, brings down the blade *c*, which performs its work with neatness and celerity. The implement is 18 inches long, including the handles; the latter being of wood, and may be easily made from the drawing; Mr. Foote generously placing his invention at the service of the public. Ed.]

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Clinton Grape.—A native grape has been cultivated for several years in the western part of New-York, under this name, specimens of which have been sent us lately by J. W. Bissell, Esq., of Rochester, with the following account:

I send you a few bunches of the "*Clinton*" grape. This variety is very hardy, ripens *before* the Isabella, is a good bearer, and also keeps better than the variety just named. The vine from which the cuttings were taken, was found by L. B. Langworthy, Esq., growing in the garden of Mr. Peebles, on the Hudson, above Waterford; and as there were several other varieties in the same garden it is probably some old variety, though it has never been recognised here as such. The name it now bears was given by Mr. Langworthy. Yours respectfully. *J. W. B. Rochester, Nov. 27*, 1847.

This appears to be a wild grape, or the seedling of a wild grape, quite distinct from the Isabella. The bunches sent us are not shouldered, of moderate size, and somewhat compact; (the berries set on shorter footstalks than those of the Isabella.) The berries are nearly round, or much less oval than those of the Isabella, and about two-thirds the size of the latter; colour black, with a thin blue bloom. Flesh somewhat pulpy, sweet and juicy, but with a somewhat rough and harsh after-flavor.

The Clinton grape is not equal to the Isabella for the table, though better than some other native sorts now in cultivation. In its adaptation to a northern climate, lies, we understand, its principal value; as it will flourish where the Isabella is found quite tender. We should judge it likely to prove a valuable wine grape; and it may produce a strong, rough wine, like *Port*.

To Prevent Mildew in Grapes and Gooseberries—*Dear Sir:* In accordance with your request, I now give you the result of my experiment in applying wood ashes to foreign grapes for prevention of mildew.

My principal vine border is about 300 feet long, 15 feet wide, and contains upwards of 300 vines in a bearing state, all foreign varieties.

I gave about two-thirds of this border a liberal supply of wood ashes late last fall, after the vines were covered for the winter, by spreading it on the surface of the ground; the other third received none.

The part of the border on which the ashes were applied was almost completely free from mildew, while the other part was very much injured by it; so much so, that the fruit was nearly destroyed: as, owing to the coldness and wetness of last season here, grapes generally have been more injured by mildew than for some years back.

My vines have been greatly injured for the last two years by a small saltatory insect, which I believe to be the Thrips; they are in immense numbers, and prey upon the leaves, commencing with those nearest the ground, which turn brown, wither and fall off before the fruit gets ripe. Can you suggest any plan to destroy them?

As far as my experience goes, I find the foreign grape succeeds best in an open airy exposure, if on the top of a slight rising ground, so much the better; as anything that prevents a free circulation of air, such as board fences or walls, has a tendency to cause mildew. The soil does not require to be deep, but should be thoroughly drained. My soil is a strong clayey loam; and I find those planted on the thinnest and clayeyest part succeed best. Of course, they will require to be well and regularly manured wherever planted.

I have found the above mode of planting a complete preventive for the mildew on gooseberries, also. For several years, when mine were planted in my garden, which is enclosed with a high board fence, the fruit of all kinds was so badly mildewed that none ripened. As a last resort, I removed them to an open place on a slight rising ground; and since then, for the last four years, there has not been a trace of mildew on them.

I have a number of the best kinds, including Woodward's White Smith, Wellington's Glory, Crown Bob, Lion, Ocean, &c. &c.; but I find the Warrington Red to be decidedly the best of any for cultivation in this country, as it also was by far the best kind cultivated in England; it grows with me considerably larger than I ever saw it there. The fruit should be left on the bush till it gets quite red; this caution is necessary, as it is later of ripening than the generality of kinds, and by many would be considered ripe when only slightly coloured, as it is then very sweet and good. It hangs longer without spoiling, or cracking with wet weather, than any other kind; and though not one of the largest, it is considerably above medium size. I have raised quite a number of kinds from seeds, several of which have turned out very good; some are larger than any of my named kinds, and are finer flavored than any except the Warrington.

I have planted some superior wild kinds beside

the others, and mean to try and raise hybrids, as, also, to see what difference cultivation will make on the fruit. Yours truly. *James Dougall. Rosebank, near Amherstburg, Canada West.*

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Climate of Part of Canada West.—With regard to the effect the proximity of the great lakes has in ameliorating the climate, I fear my observations have not been sufficiently accurate to give much interest. I, however, think that the climate here is as mild as it is considerably farther south on the sea-board; as I have, several times, left New-York city after the Dahlias had been destroyed by frost there, and on reaching here found them uninjured. The thermometer seldom falls very low in winter, and we have very little snow. We are, however, often subject to late spring frosts which do considerable injury, and which I think are caused partly by the large quantities of floating ice in the upper lakes at that season of the year.

On examination, I find the first fall frosts in the last three years, were on Oct. 15th, 1845, Oct. 22d, 1846, and Oct. 14th, 1847; and the latest spring frosts in the same years were on May 8th, 1845, April 15th, 1846, and April 18th, 1847. On 29th May, 1845, there was also a severe frost; but it was occasioned by a most destructive hail storm, the stones of which were from two to three inches in diameter, and covered the ground to the depth of a couple of inches.

The coldest days in the winter months of these years were,

1845, Jan. 31st, 10°; Feb. 6th, 8°.

1845 and '46, Dec. 18th and 19th, —1°; Jan. 22d, 4°; Feb. 26th, —1°.

1846 and '47, Dec. 15th, 17°; Jan. 8th, —3°; Feb. 23d, 5°; March 12th, 14°.

We are much troubled with some kinds of birds in this part, which, as far as I can see, confer little or no benefit to compensate for the loss of nearly all our fruit; as they only make their appearance in the gardens when the fruit begins ripening, and leave as soon as it is over. The worst are the *American Robin, Cedar bird, Scarlet Tanager*, and *Louisiana Tanager;* of these, the last is decidedly the most troublesome, as nothing that I can try—nets, sheets, &c., can keep them from the fruit. They are very fond of gooseberries; and though I covered some bushes with nets, and others with sheets, they would creep under them and eat every berry on the bushes. As to cherries, we never get any ripe.

I am convinced my peach crop was much injured last season by the Orchard Oriole. When the trees were in blossom, I noticed several of these birds flying from flower to flower, and inserting their bill in each one on the tree, nearly. At first, I thought they were catching insects; but on closer examination I found it was the nectareous juice that they were sucking, as every flower they had been at had the corolla slit open to the bottom; while, on examining some branches that they had not been at, no insects could be discovered in the flowers. None of the flowers that were slit perfected their fruit; nearly all dropped off; a few set and produced deformed fruit, while the only ones that produced good fruit were the few they had missed. Should these birds make their appearance next year, I intend giving them a warm reception.

I intended, to enable you to judge better the nature of our climate, to have given you the time of ripening of different kinds of fruit here; but I find I have forgot to do so at the proper place, and as my letter is already far too long, I will not trespass on the patience of your readers further at present. Yours truly. *James Dougall. Rosebank, near Amherstburg, Canada West, 6th Dec.*, 1847.

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Removing Budded Peach Trees.—I have about seven hundred peach trees of my own raising. Last fall I had them budded with choice varieties, and lost about 15 per cent. of the buds; these I have again budded this fall. I am very anxious to set them out in their places next spring; and should be much obliged if you would inform me, through your journal, if I can remove those trees, which I budded this fall, with any hope of not losing the buds. I am, very respectfully, yours, etc. *F. C. B.*

[Yes, without losing one of the buds, if the removal is *carefully* done. Everything, of course, depends upon the care exercised not to rub off *the* bud which is to form the future tree. They should be headed down to within a couple of inches of the bud, before removal, or directly before planting them. We have seen hundreds of peach trees moved "in the bud," as nurserymen say, into good soil, and the buds make heads three or four feet high the same season.]

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William Penn Chrysanthemum.—We saw, last month, in the fine conservatory of N. J. Becar, Esq., Brooklyn, N. Y., a new and remarkably fine Chrysanthemum, received, under this name, from Philadelphia. It appeared to us one of the most perfectly formed flowers of the genus we had ever seen: each blossom very full double, symmetrically shaped, and almost globular in form. The color is white; and it is, on the whole, much superior to any of the new European varieties of this old autumnal favorite, which have reached this country lately. Will some of our readers in Philadelphia give us an account of its origin?

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Nurserymen's Convention.—A convention of nurserymen and fruit-growers was held at Columbus, Ohio, the first week in October, with the laudable purpose of comparing fruits from different sections of the State, correcting errors in names of fruits, establishing a correct standard of nomenclature for the varieties in general cultivation, etc. etc. Our correspondent, Mr. Springer, was appointed chairman, and Messrs. Elliott of Cleveland, and Bateham of Columbus, secretaries. The convention commenced the session, by "unanimously voting that the 'Fruits and Fruit-trees of America' be the standard work from which the names of fruits be determined." A large number of fruits, especially of apples, was, we understand, exhibited—and much confusion in nomenclature discovered, and the true names determined. Mr. Elliott has, we learn, undertaken the labor of preparing a report of the proceedings, which we shall look for with interest.

THE SEASON.— The past autumn, and the early part of winter, have been unusually fine and mild with us. With the exception of three days of severe frost, at the close of October, the season has been singularly genial and warm, and the atmosphere remarkably clear and bright.

On the 29th of November, we had in our grounds pansies, mignonette, sweet alyssum, and some other plants still blooming finely. As late as the 12th of December, the weather was so mild, that vegetation was kept up in all late-growing plants; and we observed that a few blossoms of the *Mezereum*, one of the first vernal shrubs, excited by the spring-like warmth, began to make their appearance.

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NEW-HAVEN POMOLOGICAL SOCIETY.—A number of gentlemen in New-Haven, devoted to the culture of fruits, formed themselves, some time ago, into a society under this name; and, we have no doubt, in connexion with the zealous Horticultural Society of that city, will accomplish much towards that end, which now occupies so prominently so many horticulturists—the collection of fine fruits, and the attainment of something like accuracy in pomology. Meetings are held weekly at the houses of the different members, where specimens are exhibited, etc.

If societies of this kind, in different parts of the country, would carry on a system of *exchanges* in the products of the fruit garden and orchard, peculiar to their districts, a great deal of useful information might be accumulated and disseminated.

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TO DESTROY COCKROACHES.—If your correspondents will try the following simple plan, I will warrant them that every beetle and cockroach will shortly disappear, and that the kitchen will not again be infested. Add about a teaspoonful of powdered arsenic to about a table-spoonful of mashed boiled potatoes; rub and mix them well together, and then crumble about a third of it, every night at bedtime, about the kitchen hearth: it will all be eaten up, or nearly so, by the following morning. The creature is very fond of potatoes, and, devouring them greedily, crawls again into its hole and perishes. I had occasion to have some alterations made in the kitchen stove, six months after I pursued this plan, and found hundreds of wings and dried mummies of defunct cockroaches. Their disappearance was not attended with the slightest perceptible smell; and though five years have elapsed, not one has again been seen in my kitchen. In putting it into practice, any remaining crumbs should be swept up the next morning.—*F. H. Horner, M. D.* [We have tried the foregoing, and found it perfectly effectual. ED.]

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THE FLOWER TRADE.— Some of your readers, who are "plain farmers," are, no doubt, in the habit of putting down flowers as "idle things, of little profit." Now I have been this morning making a little tour around among the principal florists; for I love to look at their treasures in the various pits, greenhouses and hothouses, that cluster thickly around the outskirts of a city like this. I will not weary you with the detail of all that I saw, nor even the names of the florists themselves, who appear to me to multiply every year as rapidly as their choicest cuttings, "struck in sand under bell-glasses." Messrs. THORBURN & Co., DUNLAP, and HOGG, are still, however, the great purveyors of this kind of luxury; though there are many others who grow plants, in a wholesale way, more extensively than they — such, for example, as MANTEL, BALL, MONK, &c.

The great points kept in view by the city florists, are, growing a great quantity of the most popular flowers in pots, for the market sales in spring; and growing flowers for winter bouquets. The BOUQUET business is one of no small moment, and I am pleased to see it is every day increasing. I look upon it as a mark of the refinement of our people; for what gift can be more universally acceptable, more refined, or more touched with sentiment, than a fresh bouquet of lovely flowers? Truly our citizens think not. Not a ball can be given, that dozens of bouquets are not immediately wanted. The young gallant who makes his first timid offering, goes to DUNLAP for his bouquet of roses and violets; and the millionaire who wishes to delight and astonish Madame, sends to THORBURN for his rich arrangement of camellias. Opera-goers also provide themselves with wreaths and huge bouquets, to reward the successful prima donna; and the chamber of the valetudinarian is brightened by a daily offering from the hands of true friends. So that, as you see, every body is forced either by love, friendship, or vanity, to employ the beautiful language of flowers!

Well, you may suppose there must be a *somewhere* to produce all this wealth of Flora. If you go to THORBURN'S, (his garden, at Astoria, I mean,) you will find quite a forest of camellias. At MANTEL'S, I saw immense beds of sweet-scented violets and primroses, covered with glass, and in full bloom; while long cheap glazed structures, in all the florists' gardens, are filled with heliotropes, dwarf cape jasmines, stevias, roses, daphnes, heaths, and fifty other plants to supply the winter demand. One of the leading florists told me that he sold $2500 worth of bouquets last winter! When I say that there are, of one grade and another, at least fifty florists who devote themselves to this branch of gardening in and about New-York, you will see how much of a tax is most cheerfully paid in our metropolis, for the enjoyment of beautiful flowers. What we need, to complete the thing, is a *Flower Market*, like that of Paris, where all the products may be seen assembled together in one brilliant *coup-d'œil*. *Rus in Urbe*. *New-York, Dec.* 1847.

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VALUE OF INORGANIC MANURES.—We quote the following from one of Mr. HORSFORD'S interesting letters to the *Albany Cultivator*. It was written from *Giessen*—Mr. H. being engaged in chemical studies under LIEBIG; and its significance will be the better understood by those who have perused the leading article in this number. ED.]

"In the spring preceding my arrival at Giessen, PROFESSOR LIEBIG planted some grape scions under the windows of the laboratory. He fed them, if I may use the expression, upon the ashes of the grape vine,—or upon the proper inorganic food of the grape, as shown by analysis of its ashes. The *growth has been enormous;* and several of the vines bore large clusters of grapes in the course of the

season. Indeed, I know not but all, as my attention was particularly drawn to them only since the fruit has been gathered. The soil, otherwise, is little better than a pavement—a kind of fine gravel, in which scarcely anything takes root. I was shown pots of wheat, in different stages of their growth, that had been fed variously—some upon the inorganic matters they needed—others had merely shared the tribute of the general soil. The result in numbers I don't yet know, but in appearance, no one could be at a loss what might be expected." ....

THE RULES OF AMERICAN POMOLOGY.—We are much gratified to perceive the strong interest manifested, in various parts of the country, in that good work of progress—the adoption of these rules—which we announced last month. Just as this num is going to press, we learn that the following societies have also adopted substantially the same rules, viz: The HORTICULTURAL SOCIETY of ALBANY, the NEW-HAVEN HORTICULTURAL SOCIETY, and the POMOLOGICAL SOCIETY of NEW-HAVEN. There can now scarcely be a doubt but they will soon be adopted by the horticultural societies in all parts of the country. ....

THE DEODAR CEDAR. — I think this beautiful evergreen tree, from the high mountains of India, described by you in the first volume of the Horticulturist (p. 17,) will prove a very fine addition to our hardy evergreens. I have had two specimens planted out, which have been fully exposed the last two winters, without the least injury; while young cedars of Lebanon have been slightly discolored or browned in their foliage by frost. With me it also grows as rapidly again as the cedar of Lebanon, and, at least, in a young state, is a more graceful and elegant tree. X. Y. Z. *N. York, Dec.* 6, 1847.

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ASHMORE APPLE.— A specimen of this fruit is here, from Mr. J. WOOD of Jefferson county. It is the most beautiful apple I have ever seen. It is about the size of the Red Astrachan: the surface is glossy, smooth; and the color a rich crimson red, shaded into pale red, and from that into a pale yellowish white. It is also fine for eating; and from what I have now seen of it, I am decidedly of opinion that it will be much sought after as soon as it becomes known. *F. R. Elliott, Cleveland Herald.*

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ERNESTINE DE BARENTE ROSE. — This is one of the new French roses, and is indeed a beautiful little flower, very regularly cupped, very double, and in shape much resembling a fine double ranunculus. Its size is scarcely larger than a quarter dollar, and its color is a bright pink. With its delicate, small, dark foliage, good habit, perfect hardiness, and abundant blooming qualities, it forms one of the most desirable little floral gems we know. —*Parsons on the Rose.*

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STRANGE PHENOMENON. — A few rods north of the Armory on the hill, is a deep hollow or dingle, down the bank of which the waste dirt of the shops has from time to time for a long period been thrown. This mass of rubbish, some weeks since, took fire *spontaneously*, and has been constantly burning since, notwithstanding the late powerful and heavy rains. The Eagle Company, No. 1, Capt. Tower, determined to try its skill with the devouring element. After throwing on to the burning pile vast quantities of water, which seemed to have the effect to concentrate the heat rather than to quench it. it burst forth from the uppermost point, ejecting fire, steam and smoke, to a considerable height, giving us a beautiful miniature *volcanic eruption*. On the bank, immediately over the burning pile, is a magnificent elm. This burning mass seems to have embraced the roots of the tree, warming it into summer life, expanding its buds almost to bursting, and in all probability will soon cover it with a beautiful foliage. —*Springfield (Mass.) Republican.*

MASSACHUSETTS HORTICULTURAL SOCIETY.

October 16th, 1847.

President MARSHALL P. WILDER in the chair.

The following gentlemen were elected members of the Society: *Life*—James H. Welch, Boston. *Subscription*—Solon Dike, Stoneham; I. H. Bacon and Robert Bacon, Medford; Amherst A. Frazar, Boston; John Donald, Brighton.

October 23d, 1847.—President MARSHALL P. WILDER in the chair. The Committee of Publication submitted the following report:

The Committee of Publication of the Massachusetts Horticultural Society feels itself obliged to apologise for the delay which has taken place in the issue of the first number of the "Transactions," the sheets of which have long been ready.

This delay has arisen from an anxious desire to have plates in a style of excellence much superior to that of those which now accompany it.

After infinite trouble and disappointment, the Committee feels satified that the process of Chromolithing, in its present state, is not adapted o a work of the character which it is determined to stamp on the Transactions of the Massachusetts Horticultural Society, or to give even a faint idea of the drawings made by their artist, Mr. William Sharp.

While, therefore, the Committee regrets, extremely, that it is obliged to issue the present number with Chromolithed plates, it has resolved not only that the plates of the future numbers shall appear in a very different style, but that if possible, those of the first number shall be reproduced in a uniform manner.

Voted, That the report of the Committee of Publication be accepted.

October 30th, 1847.—President MARSHALL P. WILDER in the chair. The Committee on Fruits submitted, for adoption by the Society, the following Rules of Pomology:

[These Rules were published in the Dec. number of the Horticulturist, page 274.]

Voted, That the foregoing Rules be adopted by the Society.

Nov. 13th, 1847.—President MARSHALL P WILDER in the chair. The following gentlemen were elected members of the Society: Edward N. Perkins, Brookline; George R. Minot and S. M. Weld, Roxbury; Nathaniel Hooper, Edward King and Horace Gray, Boston; Daniel Chaplin, Cambridge; Alex Pope and Benj. Hemmenway, Dorchester; James Hill, Somerville. Adjourned.

Fig. 1.

Fig. 2.

Fig. 4.

Fig. 3.

DESIGNS FOR RUSTIC BUILDINGS